Storm Water Pollution Prevention Plan

for the

General Construction Permit

(Amendment #4)

OEPA Permit No. OHC000005

at the

Former Satralloy Site
4243 County Road 74
Mingo Junction, Ohio 43938

Prepared for:
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April 2019

Estimated Project Dates:

Interim Action Demolition
Project Start Date: July 2019
Project Completion Date: December 2020

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1.0 INTRODUCTION

This Storm Water Pollution Prevention Plan (SWP3) has been prepared on behalf of Cyprus Specialty Metals Company ("Cyprus Specialty Metals" or "Owner") for demolition and regulated materials abatement work at the Former Satralloy Site (the Site) in Jefferson County, Ohio. The work conducted under this SWP3 will be done in preparation for remedial investigation and feasibility study activities and ultimately remedial actions to be conducted at the Site. These activities will be conducted under the General Industrial Storm Water Permit (the Permit) issued for the Site (see Section 1.4).

This SWP3 was originally issued on April 26, 2011 and approved by the Ohio Environmental Protection Agency (OEPA) on July 24, 2012. Amendment #1 to this SWP3 was issued on July 16, 2013, Amendment #2 was issued in December 2014, and Amendment #3 was issued on March 22, 2016. This reissue of the SWP3 constitutes Amendment #4. The purpose for this revision is to update the SWP3 to account for work already completed during Phase 1 of interim action and focus on remaining work to be performed in Phase 2.

1.1 Site History and Prior Land Use

The Former Satralloy Site consists of approximately 333 acres of land that includes an abandoned ferrochromium-alloy plant. The Site is located in Cross Creek Township, Jefferson County, Ohio, approximately four miles south of Steubenville (Drawing IAG-100). Access is via County Road 74 (Gould Road). The Site address is 4243 County Road 74, Mingo Junction, OH 43938. The Site is bordered on the north, west, and south by Cross Creek, a perennial stream that empties into the Ohio River (Drawing IAR-110).

The Site is currently a non-operating facility, which was used for industrial operations, and has several abandoned buildings and related structures. Site features are identified on Drawings IAS-400 and IAS-410.

Former processing facilities consist primarily of two production buildings ("Mill Buildings"), baghouses adjacent to the two Mill Buildings (for air pollution control during operation), concrete bins used for unloading rail cars, an electrical building, an administration (office) building, a laboratory, a water supply plant, and a wastewater treatment plant. During the Phase 1 Interim Action, the laboratory, slurry pump plant, and wastewater treatment plant were demolished, the administrative building was refurbished, and a rail spur was reinstalled. In addition, chromium-containing dust from facility operations was removed from accessible locations in the North and South Mill Buildings, PCB-impacted soil was removed from the electrical switchyard, and portions of the storm water management system underground piping were replaced.

The alloys produced in the Mill Buildings were made from chromium ores by smelting and refining in electric arc furnaces. Four furnaces and two converters were housed in the Mill Buildings. Piping used for transporting by-products from the processing operations to the upland areas is present from the Mill Buildings to the upland areas north of the Mill Buildings. By-products were either pumped as slurry through this piping or were hauled in trucks to the uplands.

By-products of the ferrochromium-alloy plant operations included slag and baghouse dust from the electric arc furnaces. Baghouse dust from the electric arc furnaces was present beneath the baghouses and in and around the Mill Buildings. An estimated 800,000 cubic yards of slag has been deposited across large tracts of both the upland and lowland areas of the Site.

The topography of the Site rises about 300 feet above the lowland floodplain of Cross Creek to a plateau surface. The eastern portion of the Site consists of relatively flat lowlands comprising the main plant, while the western portion of the Site is an upland plateau formerly used for disposal of process material, primarily slag, from chromium ore processing operations. In the north, the Site is largely an upland plateau and consists of heavily wooded areas with slag from former Site operations. The upland area also contains

abandoned coal mine workings from the underground room-and-pillar Kolmont No.1 Coal Mine operated by the Wayne Coal Company in the 1930s. The upland area includes a 5-acre area where chromite ore was stockpiled as part of the United States Government's strategic mineral stockpile program.

1.2 Drawings

Drawings prepared for this SWP3 in general accordance with Part III.G.1.n of the Construction General Permit are provided in Appendix A.

1.3 NPDES General Storm Water Permit

This SWP3 was prepared in general accordance with the Ohio Environmental Protection Agency (OEPA) General Permit Authorization for Storm Water Discharges Associated with Construction Activity under the National Pollutant Discharge Elimination System (NPDES). This SWP3 was prepared using BMPs and design guidance from the *Rainwater and Land Development Manual* (ODNR 2006).

The NPDES General Construction Storm Water Permit No. OHC000005 ("Permit") is effective until April 23, 2023. A copy of the General Construction Permit Coverage Letter from OEPA and the OEPA Fact Sheet for the NPDES General Permit Renewal for Discharges of Storm Water Associated with Construction Activity (OHC000005) that describes coverage renewal requirements are provided in Appendix B. A copy of the Notice of Intent (NOI) is provided in Appendix C.

1.4 Applicable Federal, Tribal, State or Local Programs

The Site is also covered under the OEPA NPDES General Industrial Permit No. OHR000005 ("General Industrial Permit"). A separate SWP3 has been prepared to manage storm water in areas outside the coverage of the Construction SWP3.

No other federal, tribal, state or local soil and erosion control and storm water management requirements were identified.

1.5 Receiving Waters

Cross Creek, which surrounds three sides of the Site (west, south and east), is the receiving water for all storm water at the Site. Cross Creek flows to the Ohio River.

2.0 ROLES AND RESPONSIBILITIES

2.1 SWP3 Team

Duties and responsibilities of key Storm Water Pollution Prevention Plan (SWP3) personnel are as follows.

Table 1. Project Roles and Responsibilities

Cyprus SMC Project Manager (CSPM)	Area of Responsibility
Barbara Nielsen Cyprus Specialty Metals Company 333 North Central Avenue Phoenix, AZ 84005 (602) 355-8270 (o) (480) 313-2895 (c)	The CSPM will have overall responsibility for the work being conducted at the Site. The CSPM will ensure that all project and regulatory requirements are met. The CSPM will be the official point of contact for all communications with OEPA, although she may authorize direct contact by other members of the project team as appropriate.

Engineer	Area of Responsibility
Golder Associates Inc. 1335 Dublin Road, Suite 126-D Columbus, OH 43215 (614) 486-1700 (o) (614) 486-1701 (f)	The Engineer will provide engineering assistance to the project as needed and perform storm water sampling.
Construction Manager (CM)	**Area of Responsibility**
Michael Lumpkin Golder Associates 18300 NE Union Hill Road, Suite 200 Redmond, WA 98052 (425) 883-0777 (o) (206) 419-7688 (c)	The Golder CM will provide day-to-day oversight of the Contractor, including SWP3 compliance.
Contractor	**Area of Responsibility**
To Be Determined.	The Contractor will have primary responsibility for implementation of the SWP3. The Contractor will perform and log all required inspections. The Contractor will prepare revisions to the SWP3 as necessary to address his work methods.

Emergency 24-Hour Contact:
Construction Manager

2.2 SWP3 Responsibilities

Cyprus Specialty Metals Responsibilities:

- Cyprus Specialty Metals will be responsible for general oversight of the project, including review of the SWP3 and any amendments, inspection reports, and corrective actions.
- Cyprus Amax, a wholly-owned subsidiary of Cyprus Specialty Metals Company, filed the Notice of Intent (NOI) to be covered by the Construction General Permit for this project.
- Cyprus Specialty Metals will inform Contractors of the terms and conditions of the General Construction Storm Water Permit.
- Cyprus Specialty Metals, represented by the CM, will oversee inspections conducted by the Contractor.
- Cyprus Specialty Metals will file the Notice of Termination (NOT) upon completion of this project.

Engineer Responsibilities:

- Storm water sampling, analysis, and reporting.

Contractor Responsibilities:

- The Contractor is responsible for all activities associated with implementing this SWP3, except storm water sampling.

- The Contractor is responsible for informing its employees and subcontractors of the terms and conditions of the General Construction Storm Water Permit.
- The Contractor will install and properly maintain any BMPs required under this SWP3.
- The Contractor will maintain the documentation required by this SWP3 and will conduct and document inspections required under Part III.G.2.i of the General Construction Permit on a weekly basis and within 24 hours of the end of a storm event of one-half inch or greater in all areas of the Site covered by this SWP3.
- The Contractor will provide copies of inspection reports to Cyprus Specialty Metals within 24 hours following each inspection. Incidents of non-compliance will be immediately brought to the attention of the CM.
- The Contractor will promptly advise the CM in writing of any BMP change that triggers the need for a SWP3 modification.
- The Contractor will maintain a clean and orderly Site. Trash and debris will be picked up and disposed of properly by the end of each day.
- All Contractor and Subcontractor employees will read and abide by this SWP3. Certifications by the Contractor and Subcontractors, acknowledging that they reviewed and understand the conditions and responsibilities of the SWP3, are provided in Appendix D.

3.0 PROJECT DESCRIPTION

This project includes the remaining abatement of regulated materials located within or as part of the structure of the buildings and demolition of the buildings and ancillary structures.

3.1 Scope of Work

The scope of work for this project includes the following seven major construction activities:

- **Activity I –** Contractor Mobilization / Establish Temporary Construction Facilities
- **Activity II -** Regulated Materials Abatement
- **Activity III** - Building Demolition - North and South Mill Buildings
- **Activity IV** – Building Demolition - Auxiliary Structures
- **Activity V** – Final Grading and Stabilization
- **Activity VI** – Settling Pond Construction
- **Activity VII** – Upgrade Access Roads in Former Mine Area

The following sections provide a brief description of each Activity.

3.1.1 Activity I – Contractor Mobilization / Establish Temporary Construction Facilities

During the Contractor Mobilization, the Site will be prepared for use by the Contractor, including bringing construction equipment and infrastructure facilities to the Site and re-establishing the Contractor Personnel Parking Area and related facilities. Temporary Construction Facilities to be used for the duration of the project, such as fuel storage and trailers to be used as construction offices, decontamination facilities, and storage container(s), will be established.

3.1.2 Activity II – Regulated Materials Abatement

Abatement of regulated materials inside buildings was completed during the Phase 1 Interim Action. Additional remaining abatement includes collection of some chromium dust in the North Mill Building and removal of a small amount of asbestos in the North Mill Building. Abatement of regulated materials inside the buildings will be completed to the extent practical prior to building demolition, followed by removal of transite roof and siding from the buildings. Abatement work will be conducted in general accordance with applicable regulations and according to the methods prepared by the Contractor.

3.1.3 Activity III – Building Demolition, North and South Mill Buildings

The Contractor will begin demolition activities in the North and South Mill Buildings. The buildings will be dismantled according to the methods prepared by the Contractor.

3.1.4 Activity IV – Building Demolition, Auxiliary Structures

The Auxiliary Structures such as the pump house, administration building, baghouses, material bins, transmission towers, and other facilities will be dismantled according to the methods prepared by the Contractor.

3.1.5 Activity V – Final Grading and Stabilization

The demolition activities are not anticipated to affect the existing grade of the Site, except at the toe of the slope behind the bins and in the mill buildings. In general, each Disturbed Area (see Section 3.3) will be stabilized upon completion of the work in that area in general accordance with Part III.G.2.b.i. of the Permit.

3.1.6 Activity VI – Settling Pond Construction

A settling pond will be constructed in the plant lowland area to provide detention and sediment removal for drainage along the railroad spur and upslope of the North Mill Building.

3.1.7 Activity VII – Upgrade Access Roads in Former Mine Area

Existing access roads in the former Mine Area will be regraded and, in some locations, paved with gravel to provide improved access for site security and future remediation activities.

3.1.8 Seasonal Work Limitations

Because the project is located in a cold weather zone, the project will be managed according to the following approach:

- If a Disturbed Area (see Section 3.3) has not been completed and permanent BMPs have not been installed by the beginning of the winter season, the affected Disturbed Area(s) will be temporarily stabilized, as necessary, to prepare for the winter season.

3.2 Project Schedule

Although some work activities may overlap, the general timeframe and sequencing of the major project activities are provided below. Note that the sequence and duration are estimates based experience with similar projects, but the actual schedule will be determined by the Contractor and may vary from that presented here.

Table 2. Satralloy Demolition Project Schedule

Major Project Activity	Activity Description	Sequence	Estimated Duration
I	Contractor Mobilization to Site / Establish Temporary Construction Facilities	Months 1-2	2 months
II	Regulated Materials Abatement	Months 3-5	3 months
III	Demolition – North and South Mill Buildings	Months 6-11	6 months
IV	Demolition – Auxiliary Structures	Months 12-14	3 months
V	Final Grading and Stabilization	Months 15-16	2 months
VI	Settling Pond Construction	Months 15-16	2 months
VII	Upgrade Access Roads in Former Mine Area	Months 3-13	10 months

Weather and other factors may also affect the timing and sequence of activities, so this schedule is only approximate.

3.3 Work and Disturbed Areas

All locations on Site where construction activities will take place during the construction project have been identified as “Work Areas” and “Disturbed Areas”, as shown on Drawings IAS-400 and IAS- 410. Table 3 identifies the work areas at the site and estimates the extent and duration of disturbance.

3.3.1 Work Areas

A “Work Area” is defined as a location where a construction activity will take place. The work will be limited to above ground activities that will not disturb the land. Activities such as grading, excavating, grubbing and/or filling will not be conducted in these areas. BMPs to be implemented for a specific Work Area are presented in Table 3.

3.3.2 Disturbed Areas

A “Disturbed Area” is defined as a location within a Work Area where activities such as grading, excavating, grubbing and/or filling will occur. A Disturbed Area will be considered “disturbed” from the time a “shovel hits the ground” in a particular area until the soils in the area have been stabilized. Disturbed Area descriptions and associated BMPs are provided in Table3 and shown on Drawings IAS-420 and IAS- 430.

Disturbed Area (> 14 days)

A Disturbed Area (>14 days) is defined as a location where activities such as grading, excavating, grubbing and/or filling will likely occur for longer than 14 days. Disturbed Area designations based on the estimated duration of the disturbance (> 14 days) are provided Table 3 and shown on Drawings IAS-400 and IAS-410. BMPs associated with Disturbed Areas (>14 days) are discussed in Section 4 and presented in Table 3.

Disturbed Area (<15 days)

A Disturbed Area (<15 days) is defined as a location where activities such as grading, excavating, grubbing and/or filling will occur and the activity will be limited to a short duration with a maximum timeframe of no longer than 14 days. The Contractor will attempt to complete Disturbed Areas (<15 days) during dry weather and in phases, where possible. Disturbed Area designations based on the estimated duration of the disturbance (<15 days) are identified in Table 3 and shown on Drawings IAS-400 and IAS- 410. Their associated BMPs, should they become necessary, are presented in Table 3.

3.3.3 Disturbed Area Estimates

The total Disturbed Area (<15 days) within the construction project is estimated to be about 7.6 acres. The total Disturbed Area (>14 days) is estimated to be about 6.6 acres. The approximate area of each Disturbed Area is presented in Table 3.

3.4 Site Grade and Impervious Areas

Given that the activities to be conducted on Site are not expected to materially affect the existing grade at the Site, the runoff coefficient before construction will be the same when construction is completed.

Impervious areas on Site currently include the building foundations and some of the roads composed of compressed slag. These areas will be left in place after the construction activities are completed. Therefore, the percentage of impervious area after construction will be the same as before construction activities. The percentage of impervious area before and after construction is approximately 6%.

3.5 Soils, Slopes, Vegetation, and Current Drainage Patterns

3.5.1 Site Soils

Soil information for the Site was obtained from the United States Department of Agriculture (USDA) Soil Maps. Soils in the Plant Area and Northern Area rest on a bedrock escarpment and consist of Udorthents soils, which are represented by urban land with minor amounts (about 3%) of natural soils. The majority of the Plant Area is flat and is covered by gravel roads and gravel parking areas or slag piles. Soils along the existing Site Roads are also composed of Udorthents. The Site Roads are covered by compressed slag. The Clean Fill Borrow Areas consist of silty clay loam soils. The USDA soil map for the project area is provided in Appendix E.

3.5.2 Topography and Slopes

The Site topography and slopes are presented on the Drawings.

Buildings and open areas are located on the eastern side of the Site in the Plant Area, which is relatively flat and bare of vegetation. The Mill Buildings and bins were constructed into the side of a hill with a slope ranging from 40% to 70%. According to the Soil Survey for Jefferson County, the soils along the slope have up to 41 inches of silt and clay loam above the bedrock.

Areas north and south of the Plant Area are identified as the Northern Area and the Southern Area, respectively. The Northern Area is generally flat but has slag piles located along its southern edge. The Southern Area is comprised of numerous slag piles. These slag piles slope to the ditch along County Road 74.

3.5.3 Storm Water Management

Current surface water drainage and stormwater management features are shown on Drawings IAS-400 and IAS-410. Because this project does not involve extensive regrading, the drainage patterns at the Site will not change significantly.

Storm water runoff generally flows from higher elevations from the area behind the buildings to the existing storm sewer system that was constructed as part of the original operational facilities and is still present in the Plant Area. This system consists of a series of culverts, catch basins, and subsurface piping that conveys storm water around the main plant area to Cross Creek. Additional pipes and catch basins were installed in 2016 and 2017 to improve the capacity of this system and allow infilling of wetlands.

Storm water that originates in the Plant Area generally flows southeast across the gravel and/or slag covered areas to a series of catch basins or culverts and then to Cross Creek. A ditch along the north side of County Road 74 discharges into Cross Creek through several culverts under the road, several of which were installed by the County. Currently, the Site is not equipped with municipal storm or sanitary sewer systems.

3.5.4 Vegetation

The sloped areas immediately behind the Mill Buildings and to the north of the planned work areas are vegetated with a variety of brush, trees, grasses, and other plants. The Plant Area is covered with gravel or slag. A few wetlands, which contain cattails and other vegetation, are present as shown on Drawings IAS-400 and IAS 410.

4.0 BEST MANAGEMENT PRACTICES

4.1 BMP Selection

The Best Management Practices (BMPs) outlined in this SWP3 have been selected and were designed in general accordance with the design guidance provided in the *Rainwater and Land Development Manual* (RLDM) (ODNR 2006). The BMPs for this project have been selected based on the following general principles:

- Emphasize erosion control
- Minimize the extent and duration of the area exposed
- Retain sediment on site

BMPs selected for this project are listed below and are presented in Table 3. Columns I and J present the BMP(s) to be established for each Disturbed Area and/or Work Area. General Site-wide BMPs are listed at the end of the table. BMP types and locations are shown on Drawings IAS-420 and IAS-430. Materials and installation requirements for the BMPs are presented in the Technical Specifications and are shown on Drawings IAS-440 and IAS-445.

The Contractor is responsible for installing BMPs in general accordance with the Drawings and the Ohio DNR guidance document. However, conditions may change during demolition activities. If the Contractor proposes to change or modify a BMP, the Contractor will notify the CM, provide a recommendation, and, if approved, this SWP3 will be updated, where necessary. These changes will be logged by the Contractor as described in Section 6.1.3.

4.2 Implementing and Monitoring BMPS

Because activities to be conducted in each Work Area, Disturbed Area (>14 days), and/or Disturbed Area (<15 days) will be completed at varying times and locations (e.g., in phases), each Disturbed Area will be managed and monitored independently of the others. The BMPs to be implemented for each activity of this project are presented in Table 3. Monitoring and recordkeeping associated with BMPs is presented in Section 6.

4.2.1 General Site-wide BMPs

Certain BMPs, such as but not limited to silt fencing, diversion berms, drainage ditches, swales, culverts, and piping were installed at the Site during previous phases of work as a precaution to prevent sediments or materials generated during interim action activities from being transported into on-Site surface waters or the existing drainage system. Silt fencing exists or will be installed to protect surface water features on Site, and screens or covers were placed in front of or on top of open, ground level culverts and/or catch basins. These BMPs will be verified as in place and functional or will be repaired or installed by the Contractor prior to working in an area. All existing general site-wide BMPs and those installed by the Contractor will be monitored and maintained by the Contractor for the duration of the Project.

4.2.2 Disturbed Area (>14 days)

BMPs necessary for preventing sediment erosion, stabilizing sediment, and controlling the conveyance of stormwater in a manner that minimizes sediment transfer to runoff at a Disturbed Area (>14 days) will be installed prior to the Disturbed Area becoming active, and they will continue to be maintained and functional until the Disturbed Area is stabilized.

4.2.3 Disturbed Areas (<15 days)

Disturbed Areas (<15 days) are those Disturbed Areas that can be completed and stabilized within 14 days. Stormwater controls are not required for construction activities that create a Disturbed Area that can be completed within 14 days. Disturbed Areas (<15 days) are identified in Table 3.

4.2.4 Disturbed Area (>14 days) Monitoring

Disturbed Areas (>14 days) will be performed. If a Disturbed Area can be started and stabilized within 14 days, no monitoring will be required. The following procedure will be used to monitor the completion status of Disturbed Areas (>14 days):

- A “Disturbed Area Monitoring Log” will be used to record the BMP installation and completion history of each Disturbed Area.
- When a Disturbed Area becomes “Active” (e.g., when it is started), log the start date on the Disturbed Area Monitoring Form.
- At the end of 7 days, the status of the work associated with the Disturbed Area will be reviewed. If it is determined that the area will be disturbed for more than 14 days total, then BMPs must be installed immediately, and this determination must be noted on the Disturbed Area Monitoring log.
- If a Disturbed Area can be completed in 14 days, no BMPs are required to be installed for that BMP. This determination must be logged on the Disturbed Area Monitoring Log.
- If completion of work in a Disturbed Area will require longer than 30 days, storm water samples must be collected. The Contractor shall notify the Construction Manager when the duration of the Disturbed Area is within 7 calendar days of the 30 day threshold.

- The stabilization date (i.e., the date when work in a Disturbed Area is completed and final stabilization measures were implemented) must be entered for each Disturbed Area on the Disturbed Area Monitoring Log.
- The Disturbed Areas Monitoring Log must be maintained with this SWP3 in Appendix F.

4.3 Non-Structural Preservation Methods

4.3.1 Biotic and Cultural Considerations

The majority of project work activities will take place within the plant area and the rail loading area. The ground surface in this area consists primarily of graded gravel and slag and is void of significant natural features. Vegetated areas outside of the Work and Disturbed Areas as shown on Drawings IAS-400 and IAS-410 will be preserved.

A biological evaluation was performed in March 2007 (WestLand 2007a). Only one federally listed species, the Indiana bat (*Myotis sodalis*), is potentially present at the Site. Further evaluation was conducted in 2007 and 2008 (Westland 2007b, 2008) and again in 2019 (WestLand 2019). Suitable habitat was identified but no individuals or roosts were observed.

Two Ohio species of concern, the sharp-shinned hawk and the woodland jumping mouse, have some potential to use the wooded portion of the Site. The eastern hellbender, an Ohio endangered amphibian, and the river redhorse, an Ohio fish species of concern, have some potential to be present in Cross Creek. Sixteen special status plant species also have some potential to be present in this area. None of the Ohio sensitive plants or animals was observed during the Site surveys.

The Ohio Historical Society stated that the Former Satralloy facility does not appear to meet the criteria for listing on the National Register of Historic Places and that the proposed remediation will not affect historic properties (Ohio Historical Society 2007).

4.3.2 Preserving Existing Habitat

Construction activities at the Site will consist of abatement of regulated materials and demolishing buildings located in the Plant Area of the Site and will not be conducted in areas that contain threatened and endangered species habitat identified on Site. When vegetated areas are required to be disturbed, efforts will be made to disturb as little vegetation as possible. In addition, the vegetated areas outside of the planned construction area will be retained. This will be done in general accordance with the following BMP:

- Tree and Natural Area Preservation (Section 7.3 RLDM)

Tree clearing activities for access road upgrades in the Mine Area will be performed only during the time from October 15 through March 31 to avoid adverse impacts to bat populations that could potentially be present in this area.

4.3.3 Buffer Zones

Where possible, a minimum undisturbed distance of 25 feet will be maintained between on-Site wetlands and the demolition or construction activity. If the zone cannot be maintained, other BMPs will be employed, as appropriate.

4.4 Erosion Control

Stabilization and erosion control BMPs will be implemented as discussed in Section 4.2 of this SWP3 and as shown on the Drawings.

4.4.1 Stabilization Timeframes

Selected stabilization BMPs will be implemented in general accordance with Part III.G.2.b. of the Permit. The Contractor will implement stabilization BMPs in general accordance with the Tables 4 and 5.

Table 4. Permanent Stabilization Timeframes

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or more	Within 7 days of the most recent disturbance.
Any areas within 50 feet of a surface water of the State and at final grade	Within 2 days of reaching final grade.
Any other areas at final grade	Within 7 days of reaching final grade within that area.

Table 5. Temporary Stabilization Timeframes

Area requiring temporary stabilization	Time frame to apply erosion controls
Any Disturbed Areas within 50 feet of a surface water of the State and not at final grade.	Within 2 days of the most recent disturbance if the area will be dormant for more than 21 days
For all construction activities, any Disturbed Areas that will be dormant for more than 21 days but less than one year and not within 50 feet of a surface water of the State.	Within 7 days of the most recent disturbance in the area.
Disturbed Areas that will be dormant over winter.	Prior to the onset of winter weather.

4.4.2 Slope Protection

Sloped areas potentially affected by this project are located immediately behind both Mill Buildings and include the feed material bins and associated retaining walls. These structures were constructed into the slopes of the hill. During demolition, the materials in the feed material bins will be removed. Portions of the concrete bin structures and associated retaining walls will be removed, and then clean fill will be placed against the remaining bulkhead walls to provide stable slopes.

Once the building structures have been removed, backfill materials will be placed against the retaining walls, which will be left in place. Backfill materials will be sloped and stabilized using a surface layer of gravel or clean crushed concrete as shown on the Drawings.

Where necessary on soil slopes, erosion control matting will be used to stabilize sloped areas. Erosion control mat will conform to the requirements of Ohio Department of Transportation (ODOT) *2010 Construction and Material Specifications*, item 712.11, Type B or C.

Concrete from demolished building structures will be crushed and reused as stabilization materials on Site. Concrete will be cleaned sufficiently to be used as “clean hard fill” in compliance with Ohio Administrative Code (OAC) 3745-400-05. Cleaned crushed concrete used for backfill will be broken into fragments no larger than 6 inches in greatest dimension or as required to remove all reinforcing steel, whichever is smaller.

4.4.3 Construction Entrances and Roads

The site currently has a primary construction entrance that is composed of crushed rock surfacing. A culvert was installed at the intersection of the Site entrance and County Road 74 to allow stormwater to flow under

the road instead of across County Road 74. The site entrance will be maintained to prevent soil and other impacted materials from being tracked off-site. The entrance road also has a small culvert where cars drive into the Contractor Parking Lot. All culverts and associated catch basins, if present, will be maintained for the duration of the project.

Certain Site roads may be repaired using slag from the pile near Catch Basin (CB) 59 as shown on Drawing IAS-420. Some of the Site roads (e.g., the access roads to the upper plateau) have steep grades. In these roads, water bars have been constructed to help prevent erosion. Additional water bars may be constructed as needed. The construction entrance, as well as plant and access roads, will be repaired as needed and in general accordance with the BMPs described in Section 5.6 of the RLDM.

4.4.4 Clean Soil Borrow Area

Clean soil to be used as backfill will be obtained from on-Site locations as shown on the Drawings. Borrow activities will be performed in stages, to limit the amount of disturbed area.

4.5 Run-On and Run-Off Control

4.5.1 Control of Storm Water Flowing Onto and Through the Project

Storm water flowing onto the project area will be managed and controlled by using natural drainage and infiltration patterns as well as the existing on-Site storm water management system that was constructed for the former industrial operations at the Site and upgraded during previous stages of interim action. Much of the upland areas of the Site and areas north and northeast of the project area are heavily vegetated allowing significant natural infiltration to occur.

The current grade in the Plant Area is nearly flat and generally drains via the existing storm water system, which consists of a series of ditches, culverts, catch basins, and subsurface piping that convey storm water through the main plant area to Cross Creek. The water discharges into Cross Creek through culverts under County Road 74. The existing storm system features are shown on Drawings IAS-400 and IAS-410.

Certain existing on-Site ditches were repaired and will be maintained to direct storm water flow away from Disturbed Areas and provide controlled flow across the Plant Area. Existing and new diversion structures (e.g., berms and ditches / swales) if any, will be constructed and maintained in general accordance with the following:

- Berms: Section 5.3 RLDM
- Swale/Ditch: Section 4.1 RLDM

4.5.2 Sheet Flow Across Site

Sheet flow across vegetated areas of the site is typically minimal during normal rain events due to the high rate of storm water infiltration as well as the collection of storm water in on-Site wetlands. The Plant area consists mainly of slag or gravel, both of which are less permeable and can exhibit sheet flow during higher intensity rainfall events. To manage sheet flow across the Site during a heavy rain, storm water is directed to the existing Site storm water system, which will be maintained and augmented as necessary as discussed in section 4.5.1.

4.5.3 Controlling Outlet Flow

Riprap is currently present at several locations on Site, as shown on the Drawings. The riprap will be maintained in general accordance with Section 4.3 and/or 4.4 of the RLDM.

4.6 Sediment Control

4.6.1 BMPs for Specific Disturbed Areas

As discussed in Section 4.2.3, Disturbed Areas (<15 days) will not require the installation of BMPs. Where necessary at Disturbed Areas (>14 days), however, sediment control BMPs will be implemented prior to beginning work activities. BMPs installed for a specific Disturbed Area may be removed after that Disturbed Area has been stabilized, subject to the approval of the Construction Manager. BMPs for each Disturbed Area are presented in Table 3.

4.6.2 Protect Storm Drain Inlets

The Site has several storm drain inlets (e.g., catch basins). They are present behind the mill buildings, at various locations across the Plant Area, and in the ditches on Site near County Road 74. BMPs will be constructed and maintained at locations shown on Drawings and in general accordance with the following:

- Screening for Storm Drain Inlet Protection: Section 6.4 RLDM, and described below
- Straw Bale Barrier with Silt Fence: as described below
- Silt Fence: Section 6.3 RLDM

Constructing combination straw bale barriers with silt fencing upstream of the culvert entrances is intended to prevent sediment from entering Cross Creek. These barriers will be constructed in existing ditches. The number and capacity of these check dams is expected to be effective based on the relatively flat topography in the Plant Area.

In addition to the combination straw bale barrier/silt fencing, screens have been placed over existing, open drop structures to prevent larger-sized debris from entering and clogging the drainage system. In some cases, geotextile may have been used to protect inlets. These structures will be maintained.

4.6.3 Silt Fencing

Silt fencing has been erected upgradient of surface water features at the Site. During Site preparation and prior to demolition and construction activities, existing silt fence will be repaired and \ or new silt fence will be installed downslope of Disturbed Areas to prevent demolition materials and sediment from entering on-Site surface waters and the existing storm drainage system. The locations of existing and new silt fences are shown in locations on Drawings IAS-400 and IAS-410, and silt fence will in general conform with the requirements of Section 6.3 RLDM.

4.7 Surface Water Protection

4.7.1 Protection of On-Site Wetlands

A wetlands delineation was conducted by WestLand Resources Inc. in April 2018 (Westland 2018). Several wetlands are present on the Site, as shown on Drawings IAS-400 and IAS-410. The wetlands delineation is currently being reviewed, and the drawings will be revised if necessary to incorporate revisions to the delineation.

Silt fencing has been or will be placed on a level contour around or on the upgradient side of wetlands that might be affected by the construction work to capture sediment prior to water entering the wetland. Diversion structures, such as berms, may be used if necessary to prevent sediment or other materials from entering wetlands in general accordance with the following:

- Berms: Section 5.3 RLDM Temporary Diversions

- Silt Fence: Section 6.3 RLDM

4.7.2 Protection of Cross Creek

Construction activities will not be conducted in Cross Creek. Sections 4.3 through 4.7 discuss the methods that will be used to prevent sediment from entering Cross Creek.

4.8 Good Housekeeping BMPs

4.8.1 Material Handling and Waste Management

Potential pollutants, including waste materials, will be managed in a manner that does not cause contamination of surface water. In addition, wastes will be managed and disposed of in accordance with applicable federal, state, and local regulations. Potential sources of pollution other than sediment that may need to be controlled are given in Table 6.

Table 6. Potential Sources of Pollution

Item	Possible Storm Water Pollutants	Location
Demolition Debris	ACM, trash, debris, solids	Plant Area
Baghouse Dust	Metals	Plant Area
Slag	Metals	Plant Area and Northern Area
Soil Containing Elevated Metal Concentrations	Metals	Plant Area
Material Delivery	Oil & grease	Plant Area, Borrow Areas, Rail Spur
Waste Storage	Trash, debris, metals, PCBs, pH, oil & grease, particulates	Plant Area
Sanitary waste	Nutrients, pH, bacteria & viruses	Plant Area
Vehicle fueling and maintenance	Gasoline, diesel, oil	Plant Area, Rail Spur
Vehicle Storage	Oil & grease	Plant Area, Rail Spur

Good housekeeping and preventative measures will be implemented to ensure that the Site is kept clean, well-organized, and free of debris. These measures include the following:

- Waste disposal containers will be available for employee and worker trash.
- Site personnel will be instructed to use provided containers and pick up trash around trailers and around the Site to prevent it from entering Site waters.
- Abatement materials and demolition debris will be handled according to approved plans developed by the Contractor and as established in the specifications for the project.

- No open burning will be allowed.
- All personnel will be trained regarding the general SWP3 requirements.
- The following general procedures for handling materials will be strictly implemented:
    - Prevent spills.
    - Follow label directions for disposal.
    - Do not introduce any materials into the waters on Site.
    - Do not bury or dispose of materials on Site. Use appropriate disposal methods.

4.8.2 Equipment/Vehicle Fueling and Maintenance Practices

Vehicle fueling and maintenance will be conducted on Site in areas specifically designated for these functions. The following precautions will be implemented at the Contractor Equipment and Maintenance Pad:

- Equipment and vehicle fueling and maintenance activities will be located away from watercourses, ditches, channels, and storm drains.
- The designated area(s) will be equipped with appropriate spill control kits and operators will be trained in their use.
- Drip pans or equivalent equipment will be placed under potential spill points during fueling.
- If emergency repairs are required in an area on Site other than the designated area, at a minimum, plastic sheeting will be placed beneath, and if raining, over the vehicle.

The Contractor's equipment maintenance locations will be inspected in general accordance with the inspection schedule established in this SWP3.

4.8.3 Control of Equipment/Vehicle Washing

Equipment and vehicle washing, conducted as part of repair, will be conducted in approved designated areas only. If a truck or piece of equipment was used in a potentially contaminated area, it will be routed through the Decontamination Pad so that tires can be cleaned and the vehicle decontaminated prior to leaving the Site. Any wash water from equipment decontamination will remain within the pad berm and allowed to evaporate or infiltrate into the ground. Truck and/or equipment tires will also be inspected prior to leaving the Site, and if necessary, will be brushed to remove loose particles or soil.

4.8.4 Spill Prevention and Control Plan

If the Contractor determines that petroleum products will need to be maintained on Site in excess of the regulatory threshold limit (1,320 gallons), a Spill Prevention Control and Countermeasures Plan will be developed and implemented by the Contractor. All on-Site petroleum product locations, regardless of the quantity stored, will be provided with secondary containment.

4.8.5 Contaminated Sediment

Sediment impacted with contaminants of concern (COCs) by former operations at the Site will be managed in general accordance with appropriate regulations. Sediments that remain on Site will be prevented from entering surface waters by the methods outlined in Sections 4.3 through 4.7 during demolition and construction activities.

4.8.6 Maintain BMPs

All temporary and permanent erosion and sediment control BMPs will be maintained and repaired as needed to ensure continued performance of their intended function. Maintenance and repair will be conducted in general accordance with the specifications and design, as well as the RLDM for each particular BMP. Visual monitoring of BMPs will be conducted by the Contractor according to the inspection schedule presented in Section 6.1.

Accumulated sediment will be removed and placed in designated on-Site locations where it will not be subject to erosion. If any BMPs are removed, disturbed soil resulting from the removal will be permanently stabilized.

4.9 Temporary and Post-Construction BMPs

4.9.1 Temporary BMPs

If temporary stabilization is needed due to impending wet weather, the following BMPs may be used:

- Mulching: BMP 7.9 RLDM
- Temporary Rolled Erosion Control Products BMP 7.12 RLDM

4.9.2 Final Stabilization

All final stabilization activities will be implemented in general accordance with Part III.G.2.b of the Permit. As work is completed, the Disturbed Area will be stabilized as necessary, to prevent wind and water erosion. The following BMPs have been selected for this purpose:

- Temporary Rolled Erosion Control Products: Section 7.12 RLDM
- Straw Matted Seed Covering: Section 7.8 RLDM
- Crushed concrete or gravel covering: described above in Section 4.4.2.

Final stabilization activities implemented at the Site will be logged on the Disturbed Areas Monitoring Log (Appendix F).

4.9.3 Post-Construction Storm Water Management

Demolition and construction activities are part of interim actions for remediation at the Site. After completion of these activities, certain stormwater control features will remain in place, will be maintained, and will be managed under the Site's General Industrial Permit (No. OHR000003), as described in the Site's Industrial Permit SWP3. Post remediation storm water management practices will be determined and implemented after final remedial activities are completed at the Site.

5.0 STORM WATER MONITORING

Storm water monitoring will be conducted to verify that BMPs selected for a particular Disturbed Area are effective at providing storm water protection. Storm water sampling will be conducted by the Engineer.

5.1 Sampling Frequency

5.1.1 Disturbed Area Samples

Disturbed Areas for the North Mill Building and South Mill Building will be monitored independently from each other, and samples of storm water runoff will be collected from Disturbed Areas in the following manner:

- Samples of the runoff from each Active Disturbed Area will be collected during the second 30-day period after the disturbance was initiated.
- If the work in the Disturbed Area is initiated and completed within one 30-day period, then sampling will not be required.
- Once a Disturbed Area has been stabilized, it is no longer "disturbed", and no further storm water monitoring will be performed for that Disturbed Area.

All required storm water monitoring will be performed on a “measurable storm event” that results in an actual discharge from the Site. “Measurable storm event” is defined as a storm event with at least 0.1 inch of precipitation that follows the preceding measurable storm event by at least 72 hours (3 days). The 72-hour storm interval does not apply if it can be documented that less than a 72-hour interval is representative for local storm events during the sampling period. To the extent practical, samples will be collected within 30 minutes of the start of the storm event.

In the case of a snowmelt, the monitoring will be performed at a time when a measurable discharge occurs at the Site. For each monitoring event, except snowmelt monitoring, the date and duration (in hours) of the rainfall event, rainfall total (in inches) for that rainfall event, and time (in days) since the previous measurable storm event will be recorded. For snowmelt monitoring, the date of the sampling will be recorded.

5.1.2 Upstream and Downstream Samples

During each sampling event (i.e., each time there is a qualifying rain event where a sample from an Active Disturbed Area will be collected), one upstream and one downstream sample will also be collected from Cross Creek. Analytical results from these samples will be used to determine whether construction activities have had an impact on the waters of Cross Creek.

5.2 Sample Locations and Methodology

Disturbed Area Samples

Samples will be collected in the following manner:

- Disturbed Areas and their associated sample locations are identified on Drawings IAS-400 and IAS-410. Column (K) in Table 3 identifies the sample number for each Disturbed Area (>14 days). Sample locations were selected based on storm water flow direction. Each sample location is intended to be representative of storm water that has crossed the Disturbed Area.
- A sampling collection area will be created immediately down flow of the BMP installed for a particular Disturbed Area (>14 days). Either a hole will be created and lined with plastic or a plastic liner will be placed on the ground down flow of the BMP in a low-lying area.
- A sample jar will be placed into the hole or low-lying area to collect a storm water sample (i.e., a grab sample).

Upstream and Downstream Samples

Two water samples, one upstream and one downstream, will be collected from Cross Creek as shown on Drawings IAS-400 and IAS-410 during each sampling event at the Site. Samples will be collected in the following manner:

- Within 30 minutes after the start of the storm event.
- A sample jar will be attached to long-handled sampling arm.
- The person collecting the sample will stand on the stream bank and extend the long-handled sampling arm over the creek and dip the sampling jar into the creek water.
- The jar will be brought back to the stream bank and sample jars will be filled from the primary sampling jar.

Samples will be labeled, transported, and analyzed in general accordance with the requirements of 40 CFR 136 and using test procedures with quantitation limits at or below benchmark values.

5.3 Sample Analysis

Stormwater samples from Disturbed Areas and the Upstream and Downstream samples will be analyzed for the following parameters and constituents:

- Total Suspended Solids (TSS)
- pH
- Hexavalent Chromium
- Total Chromium
- Total Dissolved Solids (TDS)

5.4 Benchmarks and Corrective Actions

Benchmark monitoring data will be used to determine the overall effectiveness of the control measures utilized at the Site. The benchmark concentrations are not effluent limitations; therefore, if the analytical results exceed the benchmark concentration, it is not a permit violation. The following table lists the benchmark concentrations for the Site.

Table 7: Benchmark Concentrations for Storm Water Sampling at the Former Satralloy Site

Parameter \ Constituent	Benchmark Concentration
Total Suspended Solids (TSS)	Monitor Only
pH	Monitor Only
Hexavalent Chromium	31 ug/L
Total Chromium	Monitor Only
Total Dissolved Solids (TDS)	Monitor Only

Analytical results will be compared to the benchmark concentrations given in the table above. If an exceedance occurs, then the selection, design, installation, and implementation of additional control measures will be implemented for the associated Disturbed Area. Examples of control measures that could be considered include routing clean water away from a Disturbed Area, removing source material from drainage channels, or phasing construction to minimize runoff.

5.5 Adverse Weather Conditions

When adverse weather conditions prevent the collection of samples, a report will be prepared, in lieu of the sampling data, that describes the reasons why samples could not be collected, including available documentation of the adverse weather event. Adverse weather conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, electrical storms, or situations that otherwise make sampling impractical.

5.6 Sampling Records

Sampling events will be documented on the Disturbed Area Storm Water Sampling Log (Appendix G), which includes the following information:

- Date and duration (in hours) of storm event
- Amount of Precipitation (in inches)
- Duration between storm events (time in days between the storm event when sampling is being conducted and the last storm event that produced rainfall great than 0.1 inches of rain)

5.7 Reporting

5.7.1 Laboratory Report

A copy of the laboratory report will be submitted electronically within 7 days of receipt, and a summary of analytical data will be prepared and submitted via email to the OEPA Site Coordinator.

5.7.2 Storm Water Monitoring Report

A Storm Water Monitoring Report will be prepared monthly during the months where Active Disturbed Areas are sampled. The Storm Water Monitoring Report will contain the following information:

- Facility name, physical address, and sampling location
- Name of receiving water
- Date of monitoring event
- Monitoring data from the event
- An explanation of the situation; including whether the data shows a benchmark exceedance, changes to BMPs that were implemented, and planned changes to BMPs as a result of the exceedance, if any
- An appropriate contact name and telephone number

The Storm Water Monitoring Report will be submitted to:

Aaron Wolfe
Storm Water Coordinator
Southeast District Office OEPA
2195 Front Street
Logan, Ohio 43138

and

Shannon Cook
Site Coordinator
Southeast District Office OEPA
2195 Front Street
Logan, Ohio 43138
(730) 380-5289

6.0 INSPECTIONS, RECORDKEEPING, AND TRAINING

6.1 Inspections

Inspections will be conducted by a qualified individual and will occur in all areas disturbed by demolition and construction activities and at all storm water discharge points. All BMPs will be inspected to assess their condition and effectiveness and to identify any maintenance and/or repair actions needed to ensure the performance of their intended function. The inspector will also evaluate and document the condition of the installed BMPs. The need to modify or install additional BMPs will be determined. If present, stormwater will be visually examined for the presence of suspended sediment, turbidity, discoloration, and an oily sheen.

In general accordance with Part III.G.2.i of the General Construction Permit, based on the results of the inspection, any problems identified will be corrected as follows:

- If the inspection reveals that a control practice or BMP is in need of repair or maintenance, it will be repaired or maintained within 3 days of the inspection.

- If the inspection reveals that a control practice or BMP fails to perform its intended function and that another, more appropriate BMP is required, the SWP3 will be amended and the new BMP will be installed within 10 days of the inspection.

- If it is determined that a control practice was not implemented as described in this SWP3, the control practice will be implemented within 10 days of the inspection. If it is determined that the control practice is not needed, the documentation will contain a statement of explanation.

6.1.1 Inspection Frequency

Site inspections will be conducted at least once per calendar week during demolition activities and within 24 hours of any of any storm event greater than ½ inch of rain during a 24-hour period. The inspection frequency for temporarily stabilized, inactive areas may be reduced to once per calendar month subject to weather conditions.

6.1.2 Site Inspection Documentation

Notes regarding each inspection will be collected on a “Construction SWP3 Inspection Checklist” (Appendix H). Completed forms will be maintained at the Site.

6.1.3 SWP3 Activities Log

A log of SWP3 activities will be maintained using the Construction SWP3 Activities Log in Appendix I, including the following information:

- Site inspections.
- BMP maintenance activities.
- Modifications to BMPs or implementation of additional BMPs.

- Final Stabilization activities.

6.2 Log of Changes to the SWP3

If an inspection determines that changes are necessary to this SWP3, those changes and the reasoning for the changes will be documented on the SWP3 Amendment Log provided in Appendix J.

6.3 Maintaining and Updating the SWP3

A copy of this SWP3 will be maintained in the Site trailer. The Construction SWP3 will be maintained, updated, and implemented in general accordance with Part III.C of the Permit.

Revisions to the SWP3 will be completed within 10 days after receiving notification from the OEPA that the SWP3 does not meet the minimum requirements of the permit. A copy of the revised SWP3 or certification that the requested changes have been made will be provided to the agency within 10 days of the notification. All documents associated with this SWP3 will be made available to the OEPA, upon request.

The SWP3 will be amended whenever there is a change in the design, construction, operation, or maintenance of Site interim actions that could have a significant effect on the discharge of pollutants to offsite waters.

The SWP3 will be amended in general accordance with Part III.D of the Permit if it is determined that the SWP3 is ineffective in achieving the objectives of controlling pollutants in stormwater discharges from the construction activity. The SWP3 will be amended as necessary to include additional or modified BMPs to correct the problems identified. The amendments will be submitted to OEPA if requested.

6.4 Delegation of Authority

Currently, the Owner is responsible for overseeing the implementation of this SWP3. The Contractor will be delegated authority to implement the SWP3. The Contractor's contact information, company name, and position and responsibilities will be documented. A signed delegation of authority form is provided in Appendix K.

6.5 Training

Cyprus Specialty Metals and the Contractor are responsible for advising employees and subcontractors working on this project of the requirements in the General Construction Permit and this SWP3. Particular emphasis will be placed on ensuring that employees and subcontractors do not damage BMPs and do not introduce pollutants into the storm drain system or on-Site waters. All personnel will sign the Stormwater Pollution Prevention Training Log provided in Appendix L. Training records will be maintained as discussed in Section 5.6.

6.6 Recordkeeping

Records of all monitoring information (logs, inspection reports/checklists, maintenance records, sampling data, etc.), this SWP3, and any other documentation of compliance with permit requirements will be retained during the life of the project and for a minimum of 3 years after the date of the measurement, report, or application. In addition, for 3 years following the submittal of the notice of termination of permit coverage in general accordance with Part III.G.2.i of the General Construction Permit, the Owner will retain a record summarizing the results of the inspection, names and qualifications of personnel making the inspection, the dates of the inspection, major observations relating to the implementation of the SWP3, and certification as to whether the facility is in compliance with the SWP3 and the permit.

7.0 PLAN CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in general accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name _____

Title: _____

Signature _____

Date _____

8.0 REFERENCES

Ohio Department of Natural Resources (ODNR), 2006. Rainwater and Land Development Manual. ODNR Division of Soil and Water Conservation. Third Edition.

Ohio Department of Transportation (ODOT), 2010. Construction and Material Specifications. Ohio Department of Transportation.

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WestLand, 2007a. Biological Evaluation – Former Satralloy Site. WestLand Resources, Inc. March 2007.

WestLand, 2007b. Evaluation of Potential for Indiana Bat Occurrence on Former Satralloy Site. WestLand Resources, Inc. October 17.

WestLand, 2008. Indiana Bat Survey Report. WestLand Resources, Inc. June.

WestLand, 2018. Revised Preliminary Jurisdictional Waters Delineation and Wetland Scoring at the Former Satralloy Site. Westland Resources, Inc. November.

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TABLE 3

TABLE 3
Construction SWP3 - Work and Disturbed Areas
Former Satralloy Site - Stage 2 Interim Action - Demolition

Area # (As shown on IAS-400 and IAS-410) (A)	Area Name (B)	Area Description (C)	Disturbance Description (D)	Size of Disturbed Area (square feet) (E)	Size of Disturbed Area (acres) (F)	Estimated Duration of Work (G)	Estimated Duration of Disturbance (H)	Best Management Practices (I)	Final Stabilization (J)	Stormwater Sampling Location (K)
	Project Area	The Project Area is the location where the majority of the work to be done during the Construction will take place. The various Work and Disturbed Areas are described in this table.	NA	NA	NA	16 months	Disturbed areas within the plant area are described in this document.	The BMPs listed in this table will be used, in accordance with the Construction SWP3 and the IAS Drawings, to protect surface waters from sediments generated during the construction activities. If the Contractor decides a different BMP or control is as or more effective, discuss alternative with the Construction Manager and update this table after receiving approval.	NA	NA
1	Contractor Support Area	Existing gravel area that includes personnel parking, personnel decontamination pad, security kiosk and area for trailers.	Not a disturbed area	NA	NA	16 months	NA	•Maintain CB-7 and sand tubes (ST-49). •Maintain CB-6 and silt fence and straw bale barrier (SF-48). •Install orange safety fence around CB-23 as a visual warning to protect feature and to prevent entry of material. •Maintain gravel (GC-6) in parking area. •Maintain gravel (GC-4) around decontamination pad. •Maintain gravel (GC-2) around trailers.	NA	NA
2	Primary Vehicle Access / Construction Entrance	Security fence lines entry on both sides of a gravel driveway. A culvert is present under the vehicle access road at the immediate entrance to the Site.	Not a disturbed area.	NA	NA	16 months	NA	•Maintain gravel (GC-1) on Primary Access Road. •Inspect culvert (CP-4) under entrance road and keep clear of debris.	NA	NA
3	Contractor Operations Area	Existing gravel area to be used for equipment storage, maintenance and fueling, stockpiling materials, or other operations. A wood chip pile and tire pile are located in this area.	Not a disturbed area	NA	NA	16 months	NA	•Maintain CB-17 and CB-18 and silt fence (SF-54 and SF-55). •Maintain RR-8 and CB-24. •Maintain gravel (GC-5). •Spill kits will be available and appropriate containment will be used during maintenance and vehicle fueling.	NA	NA
4	Contractor Operations Area	Existing concrete pad and gravel area to be used for equipment storage, maintenance and fueling, stockpiling materials, or other operations.	Not a disturbed area	NA	NA	16 months	NA	•Maintain CB-21/CB-41. Cover with steel plate during demolition. •Maintain gravel (GC-5). •Spill kits will be available and appropriate containment will be used during maintenance and vehicle fueling.	NA	NA
5	Contractor Operations Area	Existing concrete pad and gravel area to be used for equipment storage, maintenance and fueling, stockpiling materials, or other operations.	Not a disturbed area	NA	NA	16 months	NA	•Maintain gravel (GC-3). •Spill kits will be available and appropriate containment will be used during maintenance and vehicle fueling.	NA	NA
6	General Plant Area (between NMB and County Road 74)	Existing gravel area.	Not a disturbed area.	NA	NA	16 months	NA	•Maintain Swale #2 and RR-2. •Maintain HW-5 and silt fence and straw bale barrier (SF-47). •Install and maintain silt fence and straw bale barrier in Swale #2 (SF-63), upstream of RR-2. •Maintain gravel (GC-3).	NA	NA
7	General Plant Area (between SMB and County Road 74)	A slag stockpile is located in this area.	Not a disturbed area.	NA	NA	16 months	NA	•Maintain reinforced silt fence (SF-1) located along the south side of the filled portion of Wetland D (filled as part of Stage 1 IA activities). •Install and maintain silt fence straw bale barrier (SF-70) along south side of Wetland D. •Maintain silt fence and straw bale barrier (SF-50) located at the toe of Wetland D, upgradient of CB-59.	NA	NA

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8	Rail Off Load Ramp and Rail Spur	Rail spur will be used to transport materials and equipment to and from the Site.	Not a disturbed area.	NA	NA	16 months	NA	•Catch basins (CB-46, CB-47, CB-X1, CB-X2) convey stormwater to the conveyance system which includes Swale #3, RR-1, RR-2, and Swale #1. These BMPs will be monitored and maintained when the rail spur is in use during demolition work.	NA	NA
9	Settling Pond and Inlet/Outlet Channels	A settling pond will be installed to improve drainage in this area.	Disturbed Area (< 15 days). The settling pond and new inlet and outlet channels are to be excavated per IAR-260.	27,984	0.64	Contractor to provide	< 15 days	•Maintain RR-1. • Clean new inlet channel to proposed settling pond (Swale #1A, formerly the upper portion of Swale #1). •Excavate settling pond and new outlet channel (Swale #4).	NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
10	Swale #1B	The existing drainage ditch will be cleaned (sediment and precipitate removed).	Disturbed Area (< 15 days). Swale #1 is to be cleaned per IAR-260.	2,656	0.06	Contractor to provide	< 15 days	• Clean remaining lower portion of Swale #1 (Swale #1B).	NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
11	Non-Hazardous Waste Placement Area	Bagged dust consolidated in the high bay of the North Mill Building will be moved to the Non-Hazardous Waste Placement Area.	Disturbed Area (< 15 days). The Non-Hazardous Waste Placement Area will be cleared, grubbed and graded for waste placement.	9,118	0.21	Contractor to provide	< 15 days	•Install diversion berm (DB-4) to prevent run-on into the area.	NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-13)
12	Admin Building	The Admin Building will be demolished down to concrete slab.	Disturbed Area (< 15 days)	4,597	0.11	Contractor to provide	< 15 days		NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
13	Pumphouse	The Pumphouse will be demolished down to concrete slab.	Disturbed Area (< 15 days)	2,483	0.06	Contractor to provide	< 15 days	•Maintain CB-21/CB-41. Cover with steel plate during demolition.	NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
14	Former Truck Scale	The scale will be removed and the pit will be backfilled to grade.	Disturbed Area (< 15 days)	472	0.01	Contractor to provide	< 15 days		NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
15	North Mill Building	The North Mill Building will be demolished down to concrete slab, and backfill will be placed against the remaining high walls.	Disturbed Area (> 14 days) Refer to IAR-230 for backfill details.	130,193	2.99	Contractor to provide	> 14 days	•Maintain CB-19 and silt fence (SF-56). Cover CB with steel plate during demolition.	NA	SW-11
16	North Silos	The North Silos will be demolished down to concrete slab, and backfill will be placed in the silo recess.	Disturbed Area (< 15 days) Refer to IAR-230 for backfill details.	4,232	0.10	Contractor to provide	< 15 days	•Maintain CB-54. Install orange safety fence around CB as a visual warning to protect feature and to prevent entry of material. •Install orange safety fence around CP-5 as a visual warning to protect feature.	NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
17	North Bins and Trestle Structure	The North Bins and Trestle Structure will be demolished down to concrete slab, and backfill will be placed against the remaining portion of the bin bulkhead walls.	Disturbed Area (< 15 days) Refer to IAR-230 for backfill details.	39,030	0.90	Contractor to provide	< 15 days	•Maintain CB-28 and 29 and install/maintain sand tubes (ST-15 and ST-16). Cover CBs with steel plate during demolition. •Maintain DD-9.	NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)

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Area # (As shown on IAS-400 and IAS-410) (A)	Area Name (B)	Area Description (C)	Disturbance Description (D)	Size of Disturbed Area (square feet) (E)	Size of Disturbed Area (acres) (F)	Estimated Duration of Work (G)	Estimated Duration of Disturbance (H)	Best Management Practices (I)	Final Stabilization (J)	Stormwater Sampling Location (K)
18	Bag House #1, Blower and Off Gas Piping	The Bag House #1, Blower and Off Gas Piping structures will be demolished down to concrete slab, and backfill will be placed behind the blower.	Disturbed Area (< 15 days) Refer to IAR-230 for backfill details.	8,732	0.20	Contractor to provide	< 15 days	•Maintain CB-30. Install orange safety fence around CB as a visual warning to protect feature and to prevent entry of material.	NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
19	Bag House #2	Bag House #2 will be demolished down to concrete slab.	Disturbed Area (< 15 days)	3,150	0.07	Contractor to provide	< 15 days		NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
20	Electrical Building	The Electrical Building will be demolished down to concrete slab, and backfill will be placed against the high wall.	Disturbed Area (< 15 days) Refer to IAR-230 for backfill details.	1,760	0.04	Contractor to provide	< 15 days		NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
21	Electrical Switchyard	Backfill will be placed against the high wall.	Disturbed Area (< 15 days) Refer to IAR-230 for backfill details.	2,187	0.05	Contractor to provide	< 15 days		NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
22	Transmission Tower #1	Transmission Tower #1 will be demolished to grade.	Disturbed Area (< 15 days)	130	0.00	Contractor to provide	< 15 days		NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
23	Transmission Tower #2	Transmission Tower #2 will be demolished to grade.	Disturbed Area (< 15 days)	715	0.02	Contractor to provide	< 15 days		NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
24	Transmission Tower #3	Transmission Tower #3 will be demolished to grade.	Disturbed Area (< 15 days)	715	0.02	Contractor to provide	< 15 days	•Maintain HW-50 and install/maintain silt fence and straw bale barrier (SF-61).	NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-12)
25	South Mill Building	The South Mill Building will be demolished down to concrete slab, and backfill will be placed against the remaining high walls.	Disturbed Area (> 14 days) Refer to IAR-240 for backfill details.	65,250	1.50	Contractor to provide	> 14 days	•Maintain RR-5 and CB-58. •Maintain DB-3. •Maintain CB-27 and install/maintain sand tubes (ST-10). •Maintain existing orange safety fence around CP-2. •Maintain DD-6. •Maintain CB-52 and install/maintain silt fence (SF-60).	NA	SW-12 and SW-13

TABLE 3
Construction SWP3 - Work and Disturbed Areas
Former Satralloy Site - Stage 2 Interim Action - Demolition

Area # (As shown on IAS-400 and IAS-410) (A)	Area Name (B)	Area Description (C)	Disturbance Description (D)	Size of Disturbed Area (square feet) (E)	Size of Disturbed Area (acres) (F)	Estimated Duration of Work (G)	Estimated Duration of Disturbance (H)	Best Management Practices (I)	Final Stabilization (J)	Stormwater Sampling Location (K)
26	South Silos	The South Silos will be demolished down to concrete slab, and backfill will be placed in the silo recess.	Disturbed Area (< 15 days) Refer to IAR-240 for backfill details.	3,986	0.09	Contractor to provide	< 15 days		NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-13)
27	South Bins and Trestle Structure	The South Bins and Trestle Structure will be demolished down to concrete slab, and backfill will be placed against the remaining portion of the bin bulkhead walls.	Disturbed Area (< 15 days) Refer to IAR-240 for backfill details.	29,031	0.67	Contractor to provide	< 15 days	•Maintain CB-25 and 26 and install/maintain sand tubes (ST-12 and ST-13). Cover CBs with steel plate during demolition. •Remove sediment and maintain CB-48. Cover CB with steel plate during demolition.	NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-12 and SW-13)
28	Bag House #3, Blower and Off Gas Piping	The Bag House #3, Blower and Off Gas Piping structures will be demolished down to concrete slab, and backfill will be placed behind the blower.	Disturbed Area (< 15 days) Refer to IAR-240 for backfill details.	8,280	0.19	Contractor to provide	< 15 days	•Maintain CB-44. Cover culvert entrance with steel plate during demolition. •Maintain DD-7.	NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-12 and SW-13)
29	Borrow Area 1G	Area will be used as source of clean soil for use as fill for other areas on site.	Disturbed Area (> 14 days). The area will be cleared and grubbed and soil will be excavated to the approximate contours shown on IAR-250.	40,474	0.93	Contractor to provide	> 14 days	•Install and maintain SF-44 at toe of Borrow Area 1G. •Maintain CB-55, CB-56 and CB-57. Install orange safety fence around CBs as a visual warning to protect feature and to prevent entry of material. •Maintain HW-50 and install/maintain silt fence and straw bale barrier (SF-61).	•Stabilization (in accordance with 02930)	SW-11
30	Borrow Area 2G	Area will be used as source of clean soil for use as fill for other areas on site.	Disturbed Area (> 14 days). The area will be cleared and grubbed and soil will be excavated to the approximate contours shown on IAR-250.	19,927	0.46	Contractor to provide	> 14 days	•Install and maintain SF-64 at toe of Borrow Area 2G. •Maintain RR-7 and DD-4. •Remove sediment and maintain CP-3. Install and maintain silt fence and straw bale barrier upstream of CP-3 culvert entrance.	•Stabilization (in accordance with 02930)	SW-11
31	Borrow Area A	Area to be used as source of clean soil if sufficient quantities are not available in Borrow Areas 1G and 2G.	Disturbed Area (> 14 days). The area will be cleared and grubbed and soil will be excavated to the approximate contours shown on IAR-250.	18,580	0.43	Contractor to provide	> 14 days	•Install and maintain SF-65 at toe of Borrow Areas A and B, if used.	•Stabilization (in accordance with 02930)	SW-11
32	Borrow Area B	Area to be used as source of clean soil if sufficient quantities are not available in Borrow Areas 1G and 2G.	Disturbed Area (> 14 days). The area will be cleared and grubbed and soil will be excavated to the approximate contours shown on IAR-250.	14,511	0.33	Contractor to provide	> 14 days	•Install and maintain SF-65 at toe of Borrow Areas A and B, if used.	•Stabilization (in accordance with 02930)	SW-11
33	Water Tank	The water tank and aboveground portions of piping, valves and associated equipment will be demolished. The concrete foundation will be removed to grade.	Disturbed Area (< 15 days).	1,257	0.03	Contractor to provide	< 15 days		NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
34	Slurry Pipeline	The slurry tower will be removed to a minimum of 3 feet below the existing ground surface and the hole will be backfilled with adjacent soil/slag. The entire length of slurry pipe will be removed.	Disturbed Area (< 15 days).	57,300	1.32	Contractor to provide	< 15 days		NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)

TABLE 3
Construction SWP3 - Work and Disturbed Areas
Former Satralloy Site - Stage 2 Interim Action - Demolition

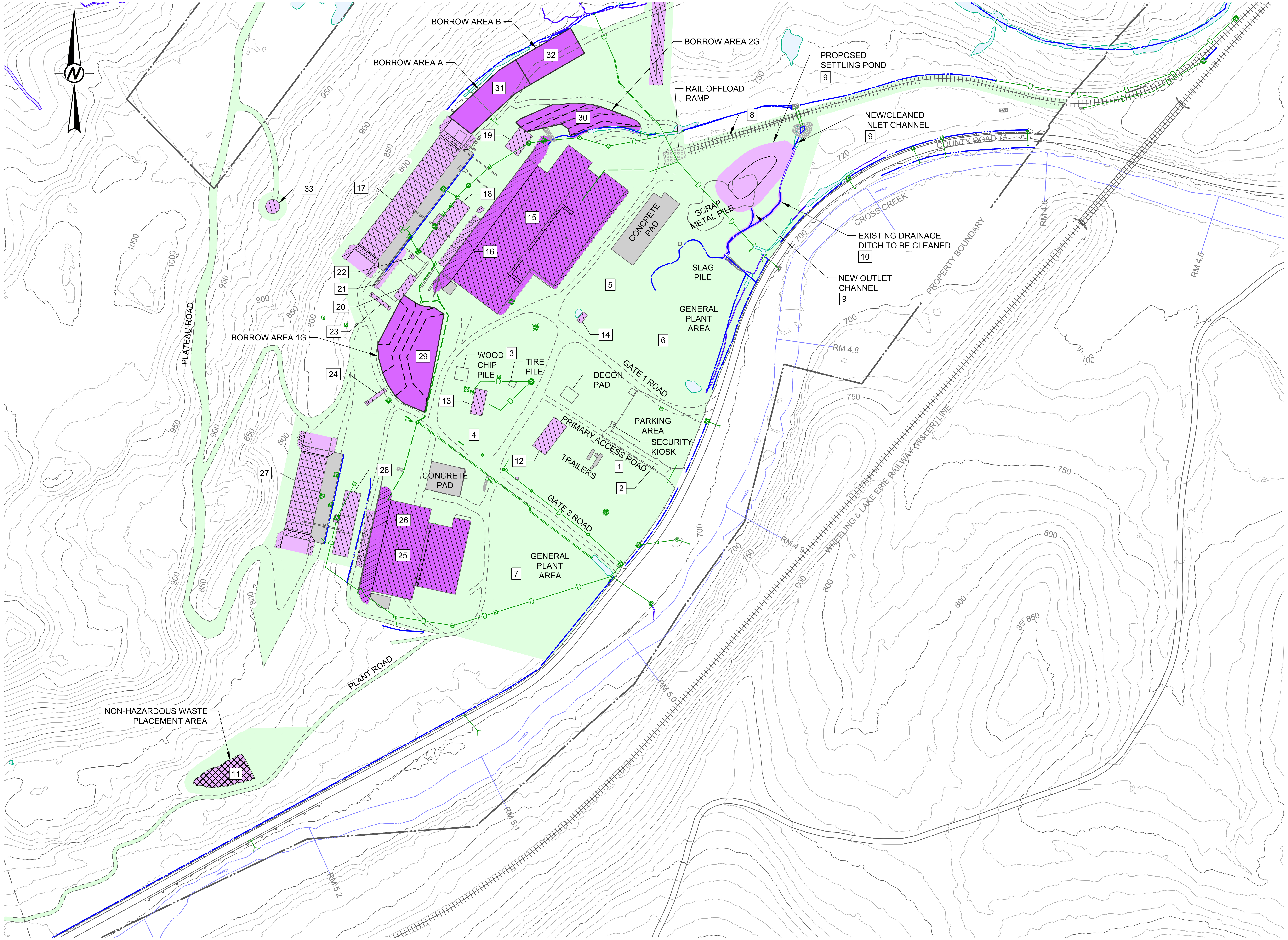
Area # (As shown on IAS-400 and IAS-410) (A)	Area Name (B)	Area Description (C)	Disturbance Description (D)	Size of Disturbed Area (square feet) (E)	Size of Disturbed Area (acres) (F)	Estimated Duration of Work (G)	Estimated Duration of Disturbance (H)	Best Management Practices (I)	Final Stabilization (J)	Stormwater Sampling Location (K)
35	Mine Area and Upper Plateau Access Road Upgrades	Sections of road will be upgraded either by grading only or by having gravel placed.	Disturbed Area (< 15 days) Refer to IAR-274 for road upgrade details.	125,034	2.87	Contractor to provide	< 15 days	•Install and maintain SF-66, SF-67, SF-68, and SF-69 above wetlands.	NA	No Sample Needed if disturbed for less than 15 days. (if longer duration, sample at SW-11)
Site Roads										
As shown on IAR-160	Site Roads	Site Roads - All site roads used during work will be maintained.	Most roads consist of slag and/or gravel. Some contain dirt. Dirt roads may become disturbed.					Roads are to be repaired and water drainage features constructed and/or maintained, where necessary. Water bars will be installed / maintained and silt fence will be placed down flow of disturbed roads, where necessary. Safety features, such as berms may also be required.		
1	Gate 1 Road	Gravel Road at Gate 1, may be used as an alternative access site.	Not a disturbed area.	NA	NA	---	---	A ditch located on the north side of the road shall be maintained to ensure discharge into the ditch (DD-5A) that conveys water to HW-5. Maintain the drainage (DD-3) on the south side of the road to CB-6.	NA	NA
2	Primary Access Road	The Primary Access Road is the main road into the plant and will be used to enter the Site. The road is composed of a geomembrane covered with gravel.	Not a disturbed area.	NA	NA	---	---	Any low spots in the Primary Access Road shall be filled so that the road stays free of ruts and potholes. Low spots that develop in the parking lot shall be filled with gravel and compacted.	NA	NA
3	Gate 3 Road	Gate 3 Road is an alternate access road. It is composed of compacted gravel, slag and dirt.	Not a disturbed area.	NA	NA	---	---	Gate 3 Road shall be graded (back bladed) to remove vegetation and any rutting deeper than 2 inches. The road will be compacted as needed.	Compacting	NA
4	Center Access Road	The Center Access Road will be used to traverse the Site to the electrical and NMB. It is primarily composed of slag.	Not a disturbed area.	NA	NA	---	---	This is the main road to the Plateau. Associated drainage ditches shall be maintained to prevent overflow. Any rutting caused by stormwater runoff shall be smoothed out. The existing safety berms on this road shall be maintained. Add and/or maintain water bars to reduce rutting in the road.	NA	NA
5	Cooling Tower Road	This road is composed mostly of slag and gravel.	Not a disturbed area.	NA	NA	---	---	This road runs through a flat open area between the Center Access Road and the Main Plant Road. It does not have a defined crown or side ditches. Maintain grade as necessary so that storm water runs off and ruts do not develop.	NA	NA
6	Main Plant Road	The Main Plant Road will be used to traverse the Site to the electrical and NMB. The road is composed of gravel and slag.	Not a disturbed area.	NA	NA	---	---	This road starts at the Railroad Offload Ramp and runs in front of both Mill Buildings. The grade will be maintained to convey precipitation into associated ditches and runoff areas.	NA	NA
7	North Access Road	The North Access Road will be used to access Borrow Areas 2G, A and B. This road runs from the Rail Offload Ramp to the NMB - Ore Access Road. This road is composed of slag.	Not a disturbed area.	NA	NA	---	---	Drainage ditches shall be maintained to prevent overflow. Any rutting caused by stormwater runoff shall be smoothed out.	NA	NA
8	NMB Lower Baghouse Road	The NMB - Lower Bag House road runs behind the NMB and under the baghouses. The road is composed of gravel and dirt.	Not a disturbed area.	NA	NA	---	---	Ditches along side this road, which may appear more like swales and low points, shall be cleaned and made contiguous with positive drainage at all locations. Ruts in the road shall be smoothed out.	Gravel, compaction if needed.	NA
9	NMB Ore Access Road	This road is in front of the NMB ore bins. It is composed of concrete.	Not a disturbed area.	NA	NA	---	---	Most of this road consists of a concrete apron in front of the bins; however, the areas leading to into and out of the concrete section are gravel and shall be graded to provide positive storm water drainage into the adjacent ditches. The ditches along the concrete apron shall be cleared and cleaned of all debris and mud so that the catch basins (CB-28 and CB-29) are exposed. The culvert on the east side of this road shall have the (north) inlet area cleaned and reshaped as necessary to provide unimpeded flow.	NA	NA

TABLE 3
Construction SWP3 - Work and Disturbed Areas
Former Satralloy Site - Stage 2 Interim Action - Demolition

Area # (As shown on IAS-400 and IAS-410) (A)	Area Name (B)	Area Description (C)	Disturbance Description (D)	Size of Disturbed Area (square feet) (E)	Size of Disturbed Area (acres) (F)	Estimated Duration of Work (G)	Estimated Duration of Disturbance (H)	Best Management Practices (I)	Final Stabilization (J)	Stormwater Sampling Location (K)
10	North Rail Spur Road	The North Rail Spur Road runs from the NMB Ore Access Road along the ridge above the rail spur.	Not a disturbed area	NA	NA	---	---	Drainage ditches along side the North Rail Spur Road shall be maintained to prevent overflow. Any rutting caused by storm water runoff shall be smoothed out.	NA	NA
11	Plant Road	The Plant Road will be used to access the Non-Hazardous Waste Placement Area. The road is composed of gravel and slag.	Not a disturbed area.	NA	NA	---	---	The Plant Road runs through a flat open area leading to the future Non-Hazardous Waste Placement Area. It does not have a defined crown or side ditches. Maintain grade as necessary so that storm water uns off and ruts to not develop.	Compaction if needed.	NA
12	SMB Ore Access Road	This road runs in front of the SMB Ore Bins and is composed of concrete.	Not a Disturbed Area.	NA	NA	---	---	Most of this road consists of a concrete apron in front of the bins; however, the areas leading to into and out of the concrete section are gravel and shall be graded to provide positive storm water drainage into the adjacent ditches. The ditches along the concrete apron shall be cleared and cleaned of all debris and mud so that the drains (CB-25 and CB-26) are exposed. The portion of the road that exits off the west side of the concrete apron and runs up to the diversion ditch shall be maintained so that it can be safety traversed by a 4-wheel drive pickup truck.	NA	NA
13	SMB Lower Access Road	This road runs behind the SMB and under the baghouses. This road also leads from the Center Access Road to the former Lab Building. Composed of slag and gravel.	Not a Disturbed Area.	NA	NA	---	---	The ditches that run along side of the SMB Lower Access Road, which may appear more like swales and low points, shall be cleaned and made contiguous so that positve drainage is maintained. Ruts in the road shall be smoothed out. Several water bars shall be maintained. DB-3 and CP-2 should be monitored and maintained.	Compaction if needed.	NA
14	Plateau Road	The Plateau Road will be used to access the water tank, slurry pipeline, and access road upgrade areas. Road is composed of slag.	Not a disturbed area	NA	NA	---	---	Maintain berms and ditches alongside the Plateau Road to prevent surface water from crossing or running down center or road.	NA	NA
15	Mine Area Access Road	The Mine Area Access Road is to be updgraded per IAR-165.	NA	NA	NA	---	---	Maintain crown for positive drainage off road. Maintain drainage ditches.	NA	NA
16	Mine Perimeter Road	The Mine Perimeter Road is to be updgraded per IAR-165.	NA	NA	NA	---	---	Maintain crown for positive drainage off road. Maintain drainage ditches.	NA	NA
17	North Slurry Pit Access Road	The North Slurry Pit Access Road is to be updgraded per IAR-165.	NA	NA	NA	---	---	Maintain crown for positive drainage off road. Maintain drainage ditches.	NA	NA
18	South Slurry Pit Access Road	The South Slurry Pit Access Road is to be updgraded per IAR-165.	NA	NA	NA	---	---	Maintain crown for positive drainage off road. Maintain drainage ditches.	NA	NA
19	Slurry Pipeline Road	The Slurry Pipeline Road is to be updgraded per IAR-165.	NA	NA	NA	---	---	Maintain crown for positive drainage off road. Maintain drainage ditches.	NA	NA
20	Northwest Ridge Road	The Northwest Ridge Road is to be updgraded per IAR-165.	NA	NA	NA	---	---	Maintain crown for positive drainage off road. Maintain drainage ditches.	NA	NA
Other Site-wide storm water features - See Master BMP by Type List.										

APPENDIX A

DRAWINGS



NOTES

1. SEE CONSTRUCTION SWP3 TABLE 3 FOR A DETAILED DESCRIPTION OF EACH WORK OR DISTURBED AREA AND CORRESPONDING BMPS.

LEGEND

- EXISTING ON-SITE ACCESS ROAD
- EXISTING COUNTY ROAD (PAVED)
- EXISTING RAILROAD
- EXISTING FENCE
- EXISTING FACILITY
- EXISTING UNDERGROUND DRAINAGE PIPE
- EXISTING CULVERT / DRAIN PIPE DISCHARGE
- EXISTING UNDERGROUND DRAINAGE PIPE (INSTALLED IN 2017)
- EXISTING MANHOLE (UNVERIFIED)
- EXISTING MANHOLE (VERIFIED)
- EXISTING CATCH BASIN (UNVERIFIED)
- EXISTING CATCH BASIN (VERIFIED)
- EXISTING HEADWALL
- EXISTING INLET (INSTALLED IN 2017)
- EXISTING DRAINAGE DITCH
- JURISDICTIONAL WETLAND
- JURISDICTIONAL TRIBUTARY
- EXISTING FACILITY (TO BE DEMOLISHED)
- BACKFILL AREA
- WORK AREA (BORDER APPROXIMATE)
- DISTURBED AREA (<15 DAYS)
- DISTURBED AREA (>14 DAYS)
- WETLAND TO BE INFILLED
- 14 WORK / DISTURBED AREA DESIGNATION (SEE SWP3 TABLE 3)

0 120 240
1" = 120' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
0	2019-04-10	ISSUED FOR BID	VMN	VMN	FSS	JW

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PROJECT
STAGE 2 INTERIM ACTION - DEMOLITION
FORMER SATRALLOY SITE

TITLE
WORK AND DISTURBED AREAS - PLANT AREA

PROJECT NO.	PHASE	REV.		SHEET
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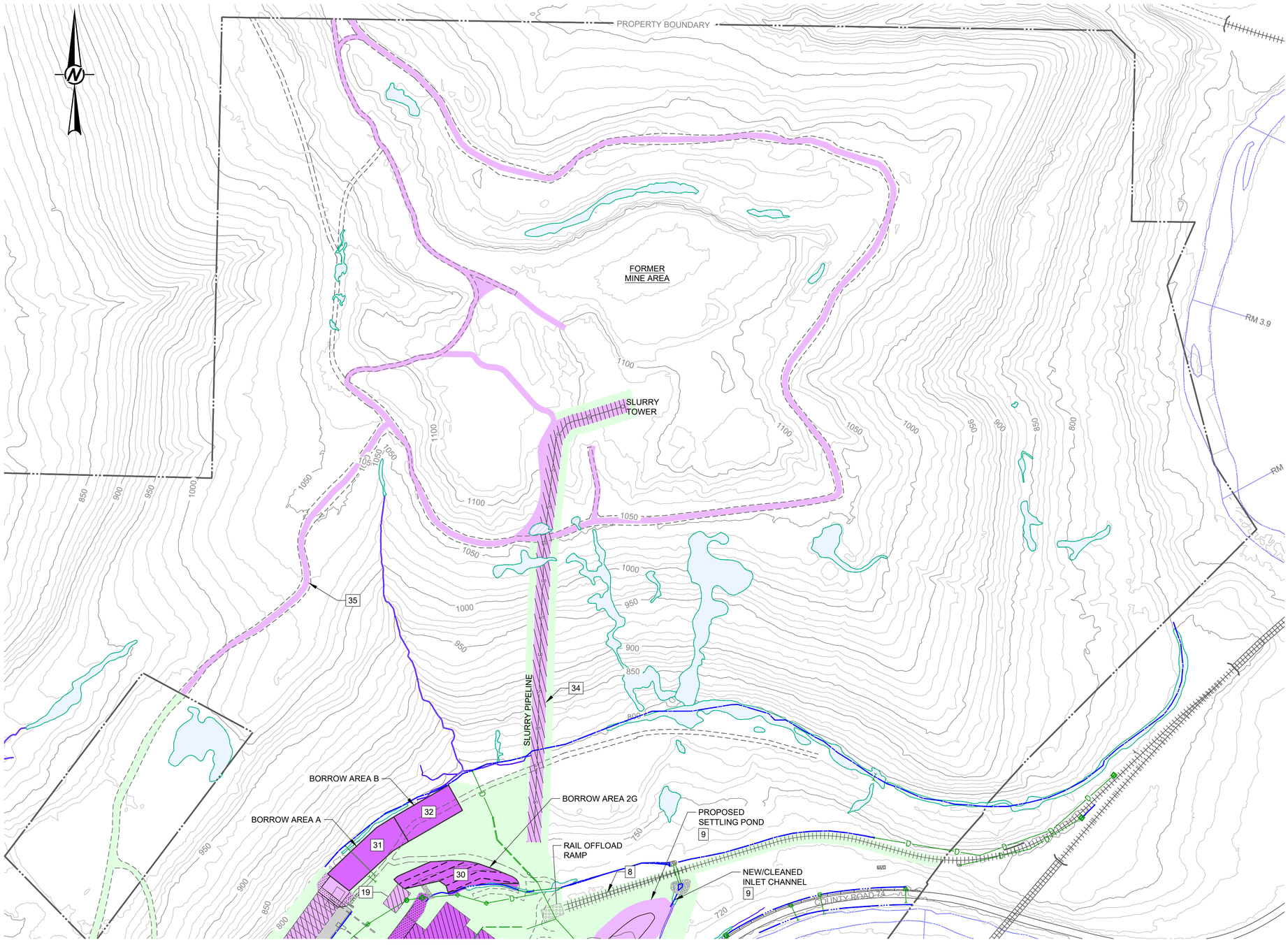

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- 14 WORK / DISTURBED AREA DESIGNATION (SEE SWP3 TABLE 3)

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1" = 120' FEET

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PROJECT
STAGE 2 INTERIM ACTION - DEMOLITION
FORMER SATRALLOY SITE

TITLE
WORK AND DISTURBED AREAS - NORTH SITE AREA

PROJECT NO.	PHASE	REV.	SHEET
1239330905	300	0	21 of 25 IAS-410

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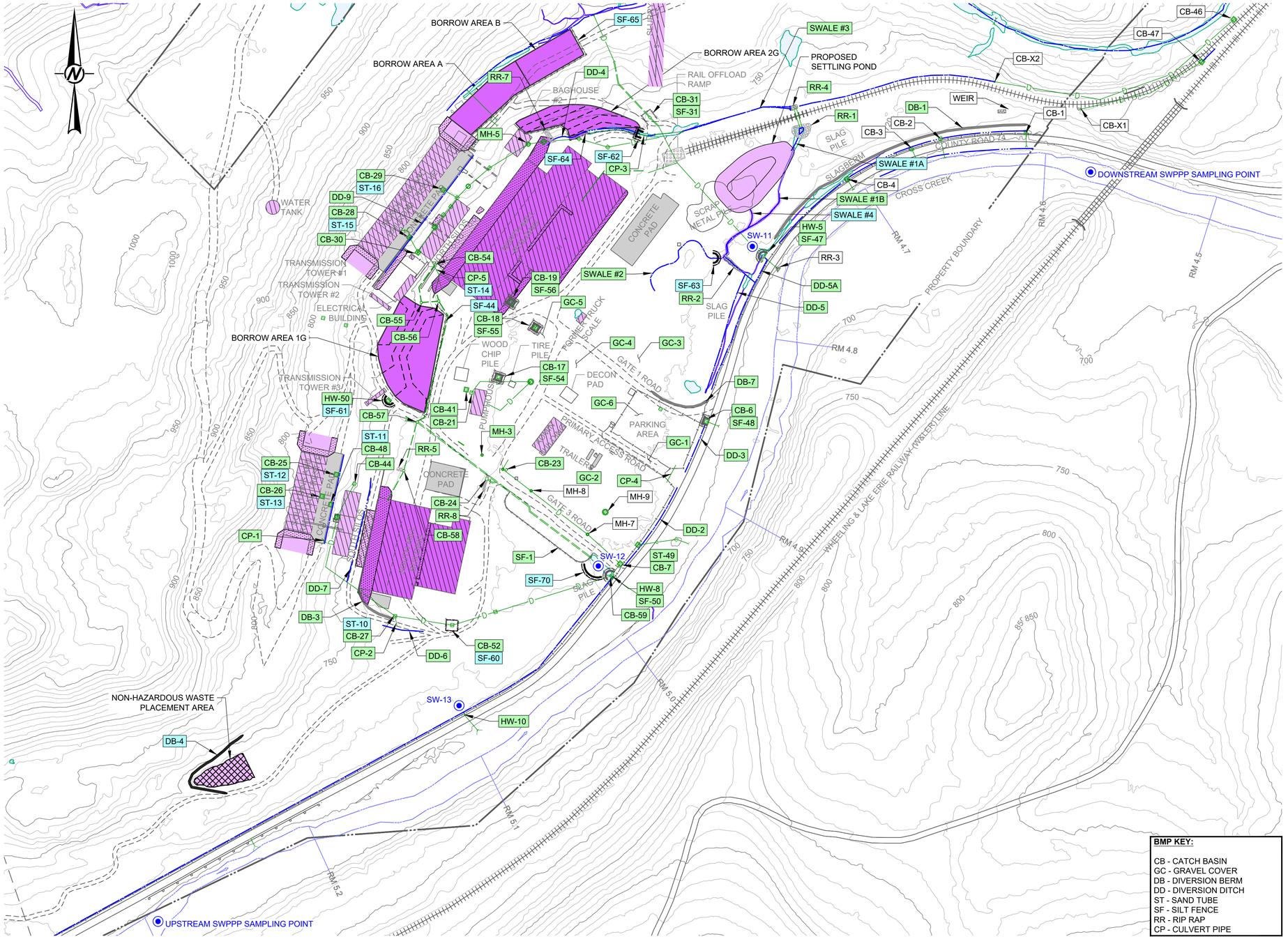

NOTES

1. INSTALL AND MAINTAIN BMPS IN ACCORDANCE WITH THE DRAWINGS AND THE CONSTRUCTION SWP3.
2. PROTECT ALL EXISTING BMPS AND DRAINAGE FEATURES FROM DAMAGE DURING DEMOLITION.

LEGEND

- EXISTING ON-SITE ACCESS ROAD
- EXISTING COUNTY ROAD (PAVED)
- EXISTING RAILROAD
- EXISTING FENCE
- EXISTING FACILITY
- EXISTING UNDERGROUND DRAINAGE PIPE
- EXISTING CULVERT / DRAIN PIPE DISCHARGE
- EXISTING UNDERGROUND DRAINAGE PIPE (INSTALLED IN 2017)
- EXISTING MANHOLE (UNVERIFIED)
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- EXISTING CATCH BASIN (UNVERIFIED)
- EXISTING CATCH BASIN (VERIFIED)
- EXISTING HEADWALL
- EXISTING INLET (INSTALLED IN 2017)
- EXISTING DRAINAGE DITCH
- JURISDICTIONAL WETLAND
- JURISDICTIONAL TRIBUTARY
- EXISTING FACILITY (TO BE DEMOLISHED)
- DISTURBED AREA (<15 DAYS)
- DISTURBED AREA (>14 DAYS)
- WETLAND TO BE INFILLED
- SF-23 BMP OR DRAINAGE FEATURE
- EXISTING FEATURE - TO BE MAINTAINED
- NEW FEATURE - TO BE INSTALLED AND MAINTAINED
- STRAW BALE BARRIER WITH SILT FENCE (1 / IAS-440)
- SILT FENCE (2 / IAS-440)
- DIVERSION BERM (3 / IAS-442)
- SW-11 SURFACE WATER SAMPLING LOCATION

BMP KEY:

CB - CATCH BASIN
GC - GRAVEL COVER
DB - DIVERSION BERM
DD - DIVERSION DITCH
ST - SAND TUBE
SF - SILT FENCE
RR - RIP RAP
CP - CULVERT PIPE

0 120 240
1" = 120' FEET

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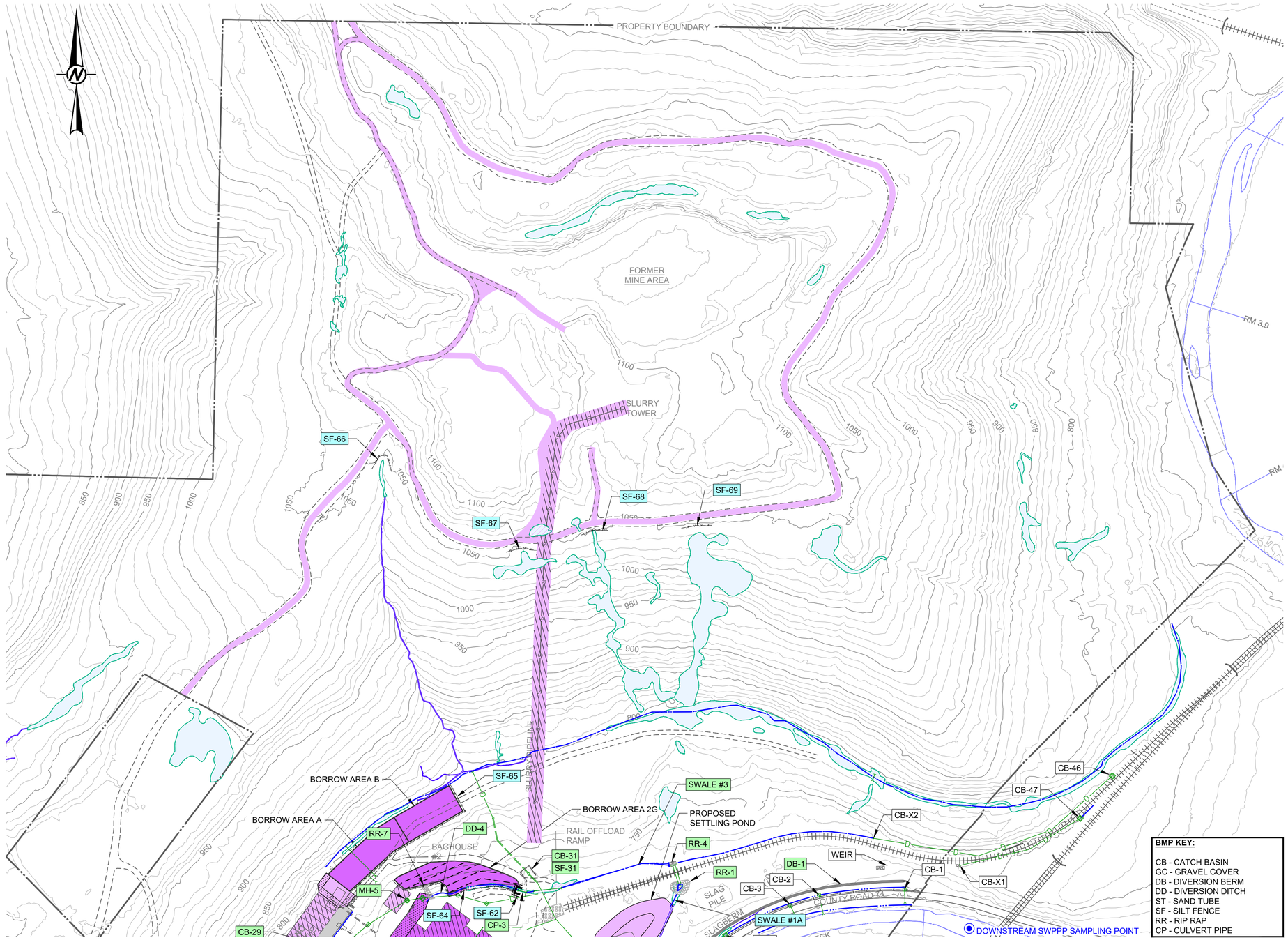
PROJECT
STAGE 2 INTERIM ACTION - DEMOLITION
FORMER SATRALLOY SITE

TITLE
BMP AND DRAINAGE FACILITY MAINTENANCE - PLANT AREA

PROJECT NO.	PHASE	REV.	SHEET
1239330905	300	0	22 of 25 IAS-420



NOTES

1. INSTALL AND MAINTAIN BMPS IN ACCORDANCE WITH THE DRAWINGS AND THE CONSTRUCTION SWP3.
2. PROTECT ALL EXISTING BMPS AND DRAINAGE FEATURES FROM DAMAGE DURING DEMOLITION.

LEGEND

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- EXISTING COUNTY ROAD (PAVED)
- EXISTING RAILROAD
- EXISTING FENCE
- EXISTING FACILITY
- EXISTING UNDERGROUND DRAINAGE PIPE
- EXISTING CULVERT / DRAIN PIPE DISCHARGE
- EXISTING UNDERGROUND DRAINAGE PIPE (INSTALLED IN 2017)
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- EXISTING MANHOLE (VERIFIED)
- EXISTING CATCH BASIN (UNVERIFIED)
- EXISTING CATCH BASIN (VERIFIED)
- EXISTING HEADWALL
- EXISTING INLET (INSTALLED IN 2017)
- EXISTING DRAINAGE DITCH
- JURISDICTIONAL WETLAND
- JURISDICTIONAL TRIBUTARY
- EXISTING FACILITY (TO BE DEMOLISHED)
- DISTURBED AREA (<15 DAYS)
- DISTURBED AREA (>14 DAYS)
- WETLAND TO BE INFILLED
- SF-23 BMP OR DRAINAGE FEATURE
- EXISTING FEATURE - TO BE MAINTAINED
- NEW FEATURE - TO BE INSTALLED AND MAINTAINED
- STRAW BALE BARRIER WITH SILT FENCE (1 / IAS-440)
- SILT FENCE (2 / IAS-440)
- DIVERSION BERM (3 / IAS-442)
- SW-11 SURFACE WATER SAMPLING LOCATION

BMP KEY:

CB - CATCH BASIN
GC - GRAVEL COVER
DB - DIVERSION BERM
DD - DIVERSION DITCH
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PROJECT
STAGE 2 INTERIM ACTION - DEMOLITION
FORMER SATRALLOY SITE

TITLE
BMP AND DRAINAGE FACILITY MAINTENANCE - NORTH SITE AREA

PROJECT NO.	PHASE	REV.	SHEET
1239330905	300	0	23 of 25 IAS-430

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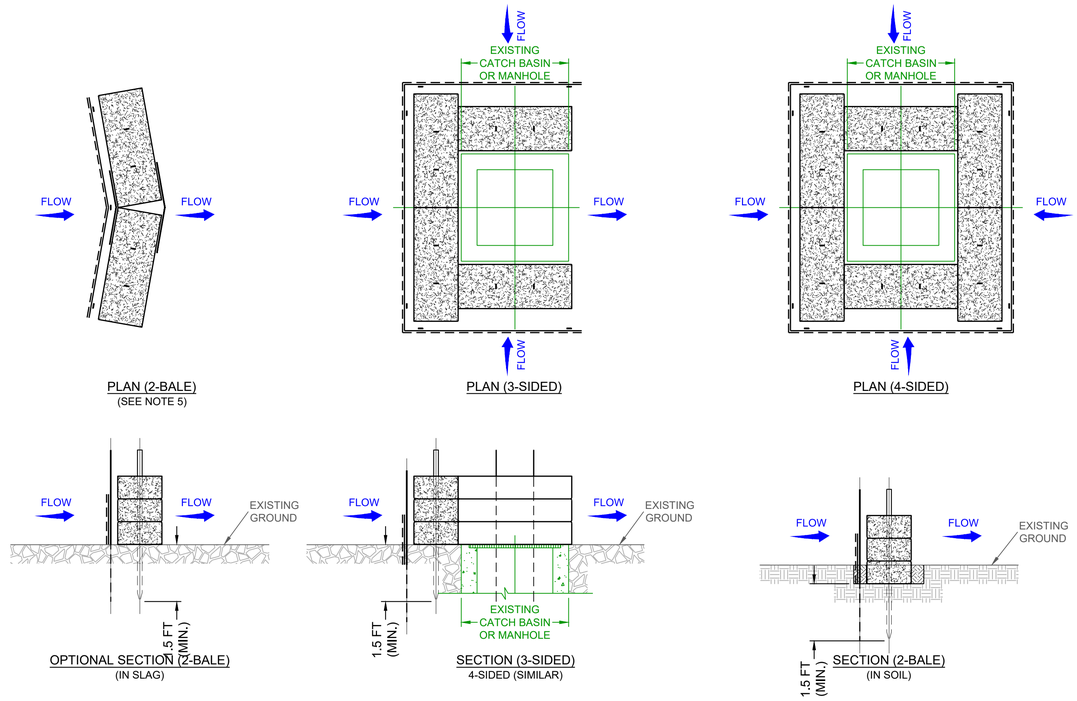
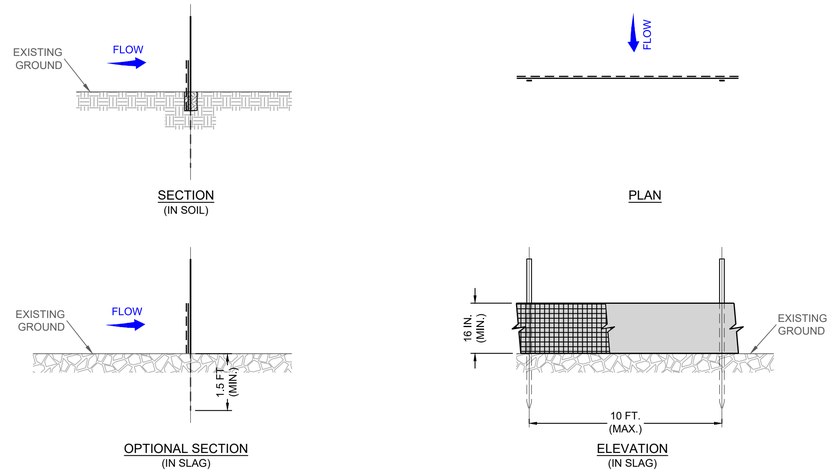


SCALE NTS 1 (IAS-440 IAS-442) STRAW BALE BARRIER WITH SILT FENCE - TYPICAL DETAILS

NOTES - STRAW BALE BARRIER:

1. ALL STRAW MATERIAL SHALL BE IN AN AIR-DRIED CONDITION FREE OF NOXIOUS WEEDS, SEEDS, AND OTHER DELETERIOUS MATERIALS. HAY SHALL NOT BE ACCEPTABLE.
2. PLACE BALES IN ROW DOWN SLOPE OF SILT FENCE AT LOCATIONS SHOWN ON THE PLAN VIEW DRAWINGS.
3. PLACE BALES TIGHTLY END-TO-END TO PREVENT GAPS.
4. AT THE ENDS OF BALE ROWS, WHERE APPLICABLE, PLACE BALES IN EXCAVATIONS A MINIMUM OF 1 FOOT DEEP TO PREVENT FLOW AROUND THE ENDS. BACKFILL AROUND BALE AND TAMP SOIL FIRMLY IN PLACE. ON SLAG, DO NOT EXCAVATE.



SCALE NTS 2 (IAS-440 IAS-442) SILT FENCE - TYPICAL DETAILS

NOTES - SILT FENCE:

1. SILT FENCE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF SECTION 712.09 GEOTEXTILE TYPE C OF THE THE OHIO DEPARTMENT OF TRANSPORTATION *2010 CONSTRUCTION AND MATERIAL SPECIFICATIONS* (ODOT *2010 SPECIFICATIONS*). OTHER COMPONENTS SHALL BE AS RECOMMENDED BY SILT FENCE MANUFACTURER.
2. SUPPORT MESH SHALL BE REQUIRED IF SPACING BETWEEN POSTS IS INCREASED OR IF IN THE OPINION OF THE CONSTRUCTION MANAGER, THE SILT FENCE IS NOT ADEQUATELY SUPPORTED TO FUNCTION AS INTENDED.
3. SUPPORT MESH SHALL BE FLUSH WITH STRAW BALES.
4. SILT FENCE BEING INSTALLED IN SLAG AREA MAY NEED STEEL POSTS TO PENETRATE INTO GROUND OR DRILL HOLE TO SET WOODEN STAKE.

GENERAL NOTES

1. INSTALL SILT FENCE AND STRAW BALES AS SHOWN ON THE DRAWINGS AND DOWN SLOPE OF CONSTRUCTION ACTIVITIES AS REQUIRED TO PREVENT TRANSPORT OF SEDIMENT BEYOND THE CONSTRUCTION AREA, OR AS DIRECTED BY THE CONSTRUCTION MANAGER.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BY THE CONTRACTOR ON A FREQUENT BASIS AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUOUS SATISFACTORY FUNCTIONING.
3. SEDIMENT SHALL BE REMOVED FROM SILT FENCES, STRAW BALE BARRIERS, AND OTHER SEDIMENT CONTROL FEATURES WHENEVER THE SEDIMENT REACHES 1/2 THE MAXIMUM POTENTIAL DEPTH.
4. FOR STRAW BALE OR SILT FENCE IN SLAG, USE METAL STAKES; FOR STRAW BALE OR SILT FENCE IN SOIL, USE WOOD STAKES

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
0	2019-04-10	ISSUED FOR BID	VMN	VMN	FSS	JW

SEAL

CLIENT
CYPRUS AMAX MINERALS COMPANY

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18300 NE UNION HILL ROAD
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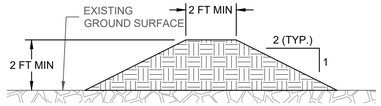
www.golder.com

PROJECT
STAGE 2 INTERIM ACTION - DEMOLITION
FORMER SATRALLOY SITE

TITLE
EROSION AND SEDIMENT CONTROL DETAILS (1 OF 2)

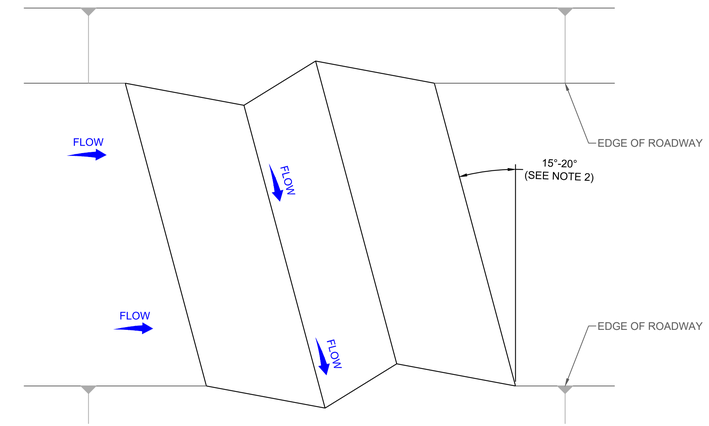
PROJECT NO.	PHASE	REV.	SHEET
1239330905	300	0	24 of 25 IAS-440



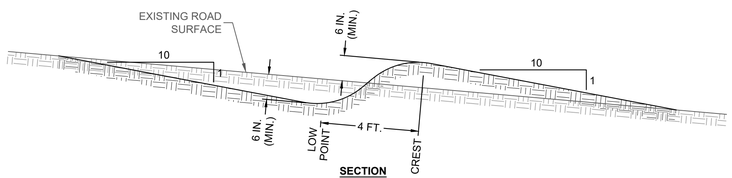
SCALE NTS 3 DIVERSION BERM - TYPICAL SECTION
IAS-440 IAS-442

NOTES - DIVERSION BERM:

1. CONSTRUCT NEW OR REPAIR EXISTING DIVERSION BERMS PER MINIMUM DIMENSIONS SHOWN.



SCHEMATIC PLAN



SECTION

SCALE NTS 5 WATER BAR - TYPICAL DETAIL
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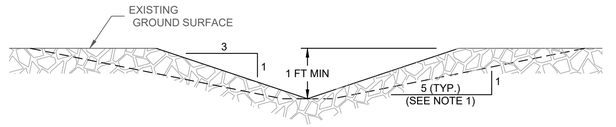
NOTES - WATER BAR:

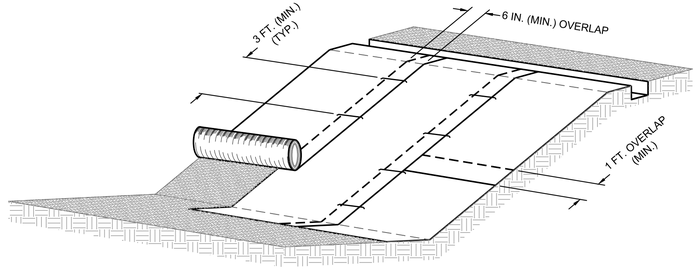
1. CONSTRUCT WATER BARS AT INTERVALS OF 200 FEET ALONG ACCESS ROAD, OR AS DIRECTED BY THE CONSTRUCTION MANAGER.
2. ANGLE WATER BAR 15°-20°AS SHOWN TO DRAIN OVER EDGE OF SLOPE.



SCALE NTS 4 DRAINAGE SWALE - TYPICAL SECTION
--

NOTES - DRAINAGE SWALE:

1. WHERE VEHICLE CROSSING IS NECESSARY, INCREASE BOTTOM WIDTH AND/OR DECREASE SIDE SLOPES, AS APPROVED BY CONSTRUCTION MANAGER. PROVIDE EQUIVALENT FLOW CROSS SECTION TO THAT SHOWN ON THIS SHEET.



SCALE NTS 6 EROSION CONTROL MATTING - TYPICAL DETAIL
--

NOTES - EROSION CONTROL MATTING:

1. SLOPE SURFACE SHALL BE SMOOTH BEFORE PLACEMENT TO PROVIDE PROPER SOIL CONTACT. DO NOT COMPACT SUBGRADE.
2. FERTILIZE AND SEED BEFORE INSTALLATION.
3. PLACE MATS WITH SEAMS RUNNING UP AND DOWN, NOT ACROSS THE SLOPE. FOR SLOPES LESS THAN 4H:1V, MATS MAY BE PLACED ACROSS THE SLOPE.
4. DO NOT STRETCH MATS TIGHT; ALLOW THE MATS TO MOLD TO ANY IRREGULARITIES.
5. STAPLING PATTERN PER MANUFACTURER'S RECOMMENDATIONS. IF STAPLING DIFFICULT, SAND BAGS CAN BE USED AS AN ALTERNATIVE. CONTRACTOR CAN PROPOSE BAG SIZE DESIGN AND PLACEMENT TO THE CONSTRUCTION MANAGER FOR APPROVAL.
6. IF THERE IS A BERM AT THE TOP OF THE SLOPE, ANCHOR UPSLOPE OF THE BERM.

GENERAL NOTES

1. DETAILS 4 THROUGH 6 MAY NOT BE REQUIRED AT THE BEGINNING OF THIS PROJECT BUT ARE INCLUDED IN CASE THEY BECOME NECESSARY DURING THE COURSE OF THE WORK.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BY THE CONTRACTOR ON A FREQUENT BASIS AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUOUS SATISFACTORY FUNCTIONING.

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
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PROJECT
STAGE 2 INTERIM ACTION - DEMOLITION
FORMER SATRALLOY SITE

TITLE
EROSION AND SEDIMENT CONTROL DETAILS (2 OF 2)

PROJECT NO.	PHASE	REV.	SHEET
1239330905	300	0	25 of 25 IAS-442

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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APPENDIX B

COVERAGE LETTER, PERMIT FACT SHEET, AND CONSTRUCTION GENERAL PERMIT

APPENDIX B1

COVERAGE LETTER
(TO BE PROVIDED AT A LATER DATE)

APPENDIX B2

PERMIT FACT SHEET

Ohio Environmental Protection Agency

Fact Sheet for

National Pollutant Discharge Elimination System (NPDES)

General Permit for Discharges of Storm Water Associated with Construction Activity (OHC000005)

I. Background

Several pollutants are associated with discharges from construction sites, including: sediment, solid and sanitary wastes, fertilizer, pesticides, oil and grease, concrete truck washout, construction chemicals, and debris. Sediment is the greatest pollutant of concern amongst these. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several years. The resulting siltation, and the contribution of other pollutants from construction sites and the new land uses, can cause physical, chemical and biological harm to surface waters. For example, excessive sediment can quickly fill rivers and lakes, requiring dredging and destroying aquatic habitat.

The federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]), which was enacted in 1972, provides that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The Clean Water Act amendments of 1987 (referred to as the Water Quality Act of 1987) explicitly required the U.S. Environmental Protection Agency (EPA) to adopt regulations to require NPDES permits of storm water dischargers associated with construction activities. Construction sites disturbing one or more acres of land have been required to obtain NPDES permit coverage since March 10, 2003.

This fact sheet addresses the fifth generation of the Construction Storm Water general permit (Permit No. OHC000005).

II. Description of General Permit Coverage and Type of Discharges

The permit authorizes storm water discharges from construction activity disturbing one or more acres and is applicable statewide. Also, the permit authorizes some discharges that are not entirely considered construction storm water (such as trench dewatering), as well as storm water discharges associated with on-site concrete and asphalt batch plants.

OHC000005 has combined the following three NPDES construction storm water general permits (CGPs) into one general permit:

General Permit	General Permit Number	Effective Date	Expiration Date
Statewide CGP	OHC000004	April 21, 2013	April 20, 2018
Big Darby Creek Watershed CGP	OHCD00002	October 1, 2012	September 30, 2017
Portions of Olentangy River Watershed CGP	OHCO00002	June 2, 2014	May 31, 2019

The Portions of Olentangy River Watershed CGP (OHCO00002) expires on May 31, 2019. Projects can continue to obtain coverage under OHCO00002 until May 31, 2019. After this date, such projects would apply for coverage under OHC000005.

III. Application and Termination Procedures

New Dischargers: To obtain initial coverage, a discharger needs to submit a complete Notice of Intent (NOI) form and appropriate application fee prior to the commencement of construction activity. These shall occur at least 45 days prior for sites within the Big Darby Creek and portions of the Olentangy River watersheds; and at least 21 days elsewhere. Projects within the Big Darby Creek and portions of the Olentangy River watersheds shall also submit a storm water pollution prevention plan (SWP3) with their NOI.

Existing Dischargers: Existing permittees having coverage under previous generations of this general permit, Big Darby Creek Watershed general permit and Portions of the Olentangy River Watershed general permit shall have continuing coverage under OHC000005 with the submittal of a timely renewal application. Within 180 days from the effective date of this permit, existing permittees shall submit a completed renewal application expressing their intent for continued coverage if needed. In accordance with Ohio Administrative Code (OAC) 3745-38-02(E)(2)(a)(i), a renewal application fee will only apply to existing permittees having general permit coverage for 5 or more years as of the effective date of this general permit. Existing permit coverage will be terminated if Ohio EPA does not receive the renewal application within this 180-day period.

Permit Expiration: The general permit renewal will expire five years after the effective date.

Notice of Termination: Permittees must submit a Notice of Termination (NOT) form within 45 days of completing all permit requirements in accordance with Part IV of this draft general permit renewal. To terminate coverage, a discharger needs to complete and submit the NOT application using the NOT electronic application form available through the Ohio EPA eBusiness Center at ***ebiz.epa.ohio.gov***. For guidance, please see the following ***epa.ohio.gov/dsw/ebs.aspx#170645012-streams-applications***.

IV. Description of Permit Conditions

In comparison to the previous NPDES statewide construction storm water general permit (OHC000004), OHC000005 contains the following noteworthy changes:

1. Permit Area (Part I.A). Incorporates the Big Darby Creek watershed CGP and Portions of the Olentangy River watershed CGP requirements as appendices. These two watersheds' previous conditions, that exceed the statewide CGP, have been included as appendices. This will combine all three general permits into one with this general permit.

2. Electronic Submittal of Applications and SWP3 (Part I.E.1 and Part I.F). OHC000005 requires Notice of Intent (NOI), Notice of Termination (NOT), Individual Lot NOI/NOT and

Co-Permittee NOI/NOT applications to be submitted electronically using Ohio EPA's electronic application forms which are available through the Ohio EPA eBusiness Center at ***ebiz.epa.ohio.gov***.

Submission through the Ohio EPA eBusiness Center requires establishing an Ohio EPA eBusiness Center account and obtaining a unique Personal Identification Number (PIN) for final submission of the applications. Existing eBusiness Center account holders can access the applications through their existing account and submit using their existing PIN. Ohio EPA has developed specific guidance for setting up an account, obtaining a PIN and submitting each type of application. For guidance, please see the following ***epa.ohio.gov/dsw/ebs.aspx#170645012-streams-applications***.

3. Sediment Basin and Sediment Barriers (Part III.G.2.d). Language has been revised to clarify that sediment basins are appropriate for sites less than 10 acres and that all sediment basins have a minimum drain time of 48 hours. The term "sediment barrier" has replaced the terms silt fence in some instances. And it is specified that a standard silt fence may be substituted with a 12-inch diameter sediment barrier.

4. Post-Construction Requirements (Part III.G.2.e). Evaluation of previous post-construction requirements found that the application of the previous methodology is not expected to capture average annual runoff and 80% total suspended solids (TSS), the following changes to post-construction requirements have been made to improve expected performance to this level:

   - Increase precipitation depth from 0.75 to 0.90 inches.
   - Alter the volumetric runoff coefficient (weighted calculation) method
     - From $C = 0.858i^3-0.78i^2+0.774i+0.04$ to $Rv = 0.05+0.9i$
   - Require the capture of the WQv with a standard post-construction practice approved for general use on all sites disturbing over 2 acres.
   - Revise and increase the of post-construction practices approved for general use. Extended detention practices have been separated from infiltrating practices and each provided appropriate drain times and notes critical to design and performance.
   - Clarify that use of regional storm water best management practices is acceptable if it meets permit design requirements and a legal agreement is provided for this service.
   - A list is provided of runoff reducing practices (green infrastructure) that may be utilized to reduce the required WQv.
   - Alternative post-construction practices must be tested using a defined particle size distribution and protocol comparable to the New Jersey DEP or Washington State TAPE Programs.
   - A water quality flow (comparable to the water quality volume) is provided to facilitate the design of flow-through type BMPs.

5. Inspections (Part III.G.2.i). Allows the next inspection after a rainfall to occur on the next work day and requires that reduced inspection frequency be documented in the SWP3.

6. Big Darby Creek Watershed Appendix (Appendix A). Adds the watershed specific conditions that exceed the statewide CGP for the Big Darby Creek watershed including: sediment basin sizing and monitoring requirements; riparian setback/mitigation requirements; and groundwater recharge/mitigation requirements. Pertaining to groundwater recharge, an option has been added of calculating a recharge value for utilizing infiltrating green infrastructure practices on-site.

7. Portions of the Olentangy River Watershed Appendix (Appendix B). Adds the watershed specific conditions that exceed the statewide CGP for portions of this watershed, specifically pertaining to riparian setback and mitigation requirements.

8. Definitions (Part VII). The definition of "Operator" has been clarified and definitions have been added for "General Contractor" and "Subcontractor."

V. Additional Information

The final general permit and associated documents can be viewed at:
http://epa.ohio.gov/dsw/storm/index.aspx

For additional information regarding this general permit, please contact one of the following:

Michael Joseph
(614) 752-0782
Michael.Joseph@epa.ohio.gov

Jason Fyffe
(614) 728-1793
Jason.Fyffe@epa.ohio.gov

APPENDIX B3

OEPA CONSTRUCTION GENERAL STORM WATER PERMIT

Issuance Date: April 23, 2018
Effective Date: April 23, 2018
Expiration Date: April 22, 2023

OHIO ENVIRONMENTAL PROTECTION AGENCY

GENERAL PERMIT AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the federal Water Pollution Control Act, as amended (33 U.S.C. Section 1251 et. seq. hereafter referred to as "the Act") and the Ohio Water Pollution Control Act [Ohio Revised Code ("ORC") Chapter 6111], dischargers of storm water from sites where construction activity is being conducted, as defined in Part I.B of this permit, are authorized by the Ohio Environmental Protection Agency, hereafter referred to as "Ohio EPA," to discharge from the outfalls at the sites and to the receiving surface waters of the state identified in their Notice of Intent ("NOI") application form on file with Ohio EPA in accordance with the conditions specified in Parts I through VII of this permit.

It has been determined that a lowering of water quality of various waters of the state associated with granting coverage under this permit is necessary to accommodate important social and economic development in the state of Ohio. In accordance with OAC 3745-1-05, this decision was reached only after examining a series of technical alternatives, reviewing social and economic issues related to the degradation, and considering all public and intergovernmental comments received concerning the proposal.

This permit is conditioned upon payment of applicable fees, submittal of a complete NOI application form, development (and submittal, if applicable) of a complete Storm Water Pollution Prevention Plan (SWP3) and written approval of coverage from the director of Ohio EPA in accordance with Ohio Administrative Code ("OAC") Rule 3745-38-02.

Craig W. Butler
Director

Total Pages: 60

TABLE OF CONTENTS

PART I. COVERAGE UNDER THIS PERMIT

A. Permit Area.

This permit covers the entire State of Ohio. Appendices A and B of this permit contain additional watershed specific requirements for construction activities located partially or fully within the Big Darby Creek Watershed and portions of the Olentangy River Watershed. Projects within portions of the Olentangy River watershed shall seek coverage under this permit following the expiration of OHCO00002 (May 31, 2019).

B. Eligibility.

1. Construction activities covered. Except for storm water discharges identified under Part I.B.2, this permit may cover all new and existing discharges composed entirely of storm water discharges associated with construction activity that enter surface waters of the state or a storm drain leading to surface waters of the state.

   For the purposes of this permit, construction activities include any clearing, grading, excavating, grubbing and/or filling activities that disturb one or more acres. Discharges from trench dewatering are also covered by this permit as long as the dewatering activity is carried out in accordance with the practices outlined in Part III.G.2.g.iv of this permit.

   Construction activities disturbing one or more acres of total land or will disturb less than one acre of land but are part of a larger common plan of development or sale that will ultimately disturb one or more acres of land are eligible for coverage under this permit. The threshold acreage includes the entire area disturbed in the larger common plan of development or sale.

   This permit also authorizes storm water discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided:

   a. The support activity is directly related to a construction site that is required to have NPDES permit coverage for discharges of storm water associated with construction activity;

   b. The support activity is not a commercial operation serving multiple unrelated construction projects and does not operate beyond the completion of the construction activity at the site it supports;

   c. Appropriate controls and measures are identified in a storm water pollution prevention plan (SWP3) covering the discharges from the support activity; and

   d. The support activity is on or contiguous with the property defined in the NOI (offsite borrow pits and soil disposal areas, which serve only one project, do not have to be contiguous with the construction site).

2. Limitations on coverage. The following storm water discharges associated with construction activity are not covered by this permit:

a. Storm water discharges that originate from the site after construction activities have ceased, including any temporary support activity, and the site has achieved final stabilization. Industrial post-construction storm water discharges may need to be covered by an NPDES permit;

b. Storm water discharges associated with construction activity that the director has shown to be or may reasonably expect to be contributing to a violation of a water quality standard; and

c. Storm water discharges authorized by an individual NPDES permit or another NPDES general permit.

3. Waivers. After March 10, 2003, sites whose larger common plan of development or sale have at least one, but less than five acres of land disturbance, which would otherwise require permit coverage for storm water discharges associated with construction activities, may request that the director waive their permit requirement. Entities wishing to request such a waiver must certify in writing that the construction activity meets one of the two waiver conditions:

a. Rainfall Erosivity Waiver. For a construction site to qualify for the rainfall erosivity waiver, the cumulative rainfall erosivity over the project duration must be five or less and the site must be stabilized with a least a 70 percent vegetative cover or other permanent, non-erosive cover. The rainfall erosivity must be calculated according to the method in U.S. EPA Fact Sheet 3.1 Construction Rainfall Erosivity Waiver dated January 2001 and be found at: http://epa.ohio.gov/portals/35/permits/USEPAfact3-1_s.pdf. If it is determined that a construction activity will take place during a time period where the rainfall erosivity factor is less than five, a written waiver certification must be submitted to Ohio EPA at least 21 days before construction activity is scheduled to begin. If the construction activity will extend beyond the dates specified in the waiver certification, the operator must either: (a) recalculate the waiver using the original start date with the new ending date (if the R factor is still less than five, a new waiver certification must be submitted) or (b) submit an NOI application form and fee for coverage under this general permit at least seven days prior to the end of the waiver period; or

b. TMDL (Total Maximum Daily Load) Waiver. Storm water controls are not needed based on a TMDL approved or established by U.S. EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, and equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. The pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the director of Ohio EPA that the construction activity will take place, and storm water discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis. A written waiver certification must be submitted to Ohio EPA at least 21 days before the construction activity is scheduled to begin.

4. Prohibition on non-storm water discharges. All discharges covered by this permit must be composed entirely of storm water with the exception of the following: discharges from firefighting activities; fire hydrant flushings; potable water sources including waterline flushings; irrigation drainage; lawn watering; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; uncontaminated ground water from trench or well point dewatering and foundation or footing drains where flows are not contaminated with process materials such as solvents. Dewatering activities must be done in compliance with Part II.C and Part III.G.2.g.iv of this permit. Discharges of material other than storm water or the authorized non-storm water discharges listed above must comply with an individual NPDES permit or an alternative NPDES general permit issued for the discharge.

   Except for flows from firefighting activities, sources of non-storm water listed above that are combined with storm water discharges associated with construction activity must be identified in the SWP3. The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

5. Spills and unintended releases (Releases in excess of Reportable Quantities). This permit does not relieve the permittee of the reporting requirements of Title 40 of the Code of Federal Regulations ("CFR") Part 117 and 40 CFR Part 302. In the event of a spill or other unintended release, the discharge of hazardous substances in the storm water discharge(s) from a construction site must be minimized in accordance with the applicable storm water pollution prevention plan for the construction activity and in no case, during any 24-hour period, may the discharge(s) contain a hazardous substance equal to or in excess of reportable quantities.

   40 CFR Part 117 sets forth a determination of the reportable quantity for each substance designated as hazardous in 40 CFR Part 116. The regulation applies to quantities of designated substances equal to or greater than the reportable quantities, when discharged to surface waters of the state. 40 CFR Part 302 designates under section 102(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, those substances in the statutes referred to in section 101(14), identifies reportable quantities for these substances and sets forth the notification requirements for releases of these substances. This regulation also sets forth reportable quantities for hazardous substances designated under section 311(b)(2)(A) of the Clean Water Act (CWA).

C. Requiring an individual NPDES permit or an alternative NPDES general permit.

1. The director may require an alternative permit. The director may require any operator eligible for this permit to apply for and obtain either an individual NPDES permit or coverage under an alternative NPDES general permit in accordance with OAC Rule 3745-38-02. Any interested person may petition the director to take action under this paragraph.

The director will send written notification that an alternative NPDES permit is required. This notice shall include a brief statement of the reasons for this decision, an application form and a statement setting a deadline for the operator to file the application. If an operator fails to submit an application in a timely manner as required by the director under this paragraph, then coverage, if in effect, under this permit is automatically terminated at the end of the day specified for application submittal.

2. Operators may request an individual NPDES permit. Any owner or operator eligible for this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application with reasons supporting the request to the director in accordance with the requirements of 40 CFR 122.26. If the reasons adequately support the request, the director shall grant it by issuing an individual NPDES permit.

3. When an individual NPDES permit is issued to an owner or operator otherwise subject to this permit or the owner or operator is approved for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of approval for coverage under the alternative general permit, whichever the case may be.

D. Permit requirements when portions of a site are sold

If an operator obtains a permit for a development, and then the operator (permittee) sells off lots or parcels within that development, permit coverage must be continued on those lots until a Notice of Termination (NOT) in accordance with Part IV.B is submitted. For developments which require the use of centralized sediment and erosion controls (i.e., controls that address storm water runoff from one or more lots) for which the current permittee intends to terminate responsibilities under this permit for a lot after sale of the lot to a new owner and such termination will either prevent or impair the implementation of the controls and therefore jeopardize compliance with the terms and conditions of this permit, the permittee will be required to maintain responsibility for the implementation of those controls. For developments where this is not the case, it is the permittee's responsibility to temporarily stabilize all lots sold to individual lot owners unless an exception is approved in accordance with Part III.G.4. In cases where permit responsibilities for individual lot(s) will be terminated after sale of the lot, the permittee shall inform the individual lot owner of the obligations under this permit and ensure that the Individual Lot NOI application is submitted to Ohio EPA.

E. Authorization

1. Obtaining authorization to discharge. Operators that discharge storm water associated with construction activity must submit an NOI application form and Storm Water Pollution Prevention Plan (SWP3) if located within the Big Darby Creek watershed or portions of the Olentangy watershed in accordance with the requirements of Part I.F of this permit to obtain authorization to discharge under this general permit. As required under OAC Rule 3745-38-06(E), the director, in response to the NOI submission, will notify the applicant in writing that he/she has or has not been granted general permit coverage to discharge storm water associated with construction activity under the terms and conditions of this permit or that the applicant must apply for an individual NPDES permit or coverage under an alternate general NPDES permit as described in Part I.C.1.

2. No release from other requirements. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations. Other permit requirements commonly associated with construction activities include, but are not limited to, section 401 water quality certifications, isolated wetland permits, permits to install sanitary sewers or other devices that discharge or convey polluted water, permits to install drinking water lines, single lot sanitary system permits and disturbance of land which was used to operate a solid or hazardous waste facility (i.e., coverage under this NPDES general permit does not satisfy the requirements of OAC Rule 3745-27-13 or ORC Section 3734.02(H)). The issuance of this permit is subject to resolution of an antidegradation review. This permit does not relieve the permittee of other responsibilities associated with construction activities such as contacting the Ohio Department of Natural Resources, Division of Water, to ensure proper well installation and abandonment of wells.

F. Notice of Intent Requirements

1. Deadlines for notification.

   a. Initial coverage: Operators who intend to obtain initial coverage for a storm water discharge associated with construction activity under this general permit must submit a complete and accurate NOI application form, a completed Storm Water Pollution Prevention Plan (SWP3) for projects within the Big Darby Creek and portions of the Olentangy river watersheds and appropriate fee at least 21 days (or 45 days in the Big Darby Creek watershed and portions of the Olentangy watershed) prior to the commencement of construction activity. If more than one operator, as defined in Part VII of this general permit, will be engaged at a site, each operator shall seek coverage under this general permit prior to engaging in construction activities. Coverage under this permit is not effective until an approval letter granting coverage from the director of Ohio EPA is received by the applicant. Where one operator has already submitted an NOI prior to other operator(s) being identified, the additional operator shall request modification of coverage to become a co-permittee. In such instances, the co-permittees shall be covered under the same facility permit number. No additional permit fee is required.

   b. Individual lot transfer of coverage: Operators must each submit an individual lot notice of intent (Individual Lot NOI) application form (no fee required) to Ohio EPA at least seven days prior to the date that they intend to accept responsibility for permit requirements for their portion of the original permitted development from the previous permittee. Transfer of permit coverage is not granted until an approval letter from the director of Ohio EPA is received by the applicant.

2. Failure to notify. Operators who fail to notify the director of their intent to be covered and who discharge pollutants to surface waters of the state without an NPDES permit are in violation of ORC Chapter 6111. In such instances, Ohio EPA may bring an enforcement action for any discharges of storm water associated with construction activity.

3. How to submit an NOI. Operators seeking coverage under this permit must submit a complete and accurate Notice of Intent (NOI) application using Ohio EPA's electronic application form which is available through the Ohio EPA eBusiness Center at: **https://ebiz.epa.ohio.gov/**. Submission through the Ohio EPA eBusiness Center will

require establishing an Ohio EPA eBusiness Center account and obtaining a unique Personal Identification Number (PIN) for final submission of the NOI. Existing eBusiness Center account holders can access the NOI form through their existing account and submit using their existing PIN. Please see the following link for guidance: **http://epa.ohio.gov/dsw/ebs.aspx#170669803-streams-guidance**. Alternatively, if you are unable to access the NOI form through the agency eBusiness Center due to a demonstrated hardship, the NOI may be submitted on a paper NOI form provided by Ohio EPA. NOI information shall be typed on the form. Please contact Ohio EPA, Division of Surface Water at (614) 644-2001 if you wish to receive a paper NOI form.

4. Additional notification. NOIs and SWP3s are considered public documents and shall be made available to the public in accordance with Part III.C.2. The permittee shall make NOIs and SWP3s available upon request of the director of Ohio EPA, local agencies approving sediment and erosion control plans, grading plans or storm water management plans, local governmental officials, or operators of municipal separate storm sewer systems (MS4s) receiving drainage from the permitted site. Each operator that discharges to an NPDES permitted MS4 shall provide a copy of its Ohio EPA NOI submission to the MS4 in accordance with the MS4's requirements, if applicable.

5. Re-notification. Existing permittees having coverage under the previous generations of this general permit shall have continuing coverage under OHC000005 with the submittal of a timely renewal application. Within 180 days from the effective date of this permit, existing permittees shall submit the completed renewal application expressing their intent for continued coverage. In accordance with Ohio Administrative Code (OAC) 3745-38-02(E)(2)(a)(i), a renewal application fee will only apply to existing permittees having general permit coverage for 5 or more years as of the effective date of this general permit. Permit coverage will be terminated if Ohio EPA does not receive the renewal application within this 180-day period.

Part II. NON-NUMERIC EFFLUENT LIMITATIONS

You shall comply with the following non-numeric effluent limitations for discharges from your site and/or from construction support activities. Part III of this permit contains the specific design criteria to meet the objectives of the following non-numeric effluent limitations. You shall develop and implement the SWP3 in accordance with Part III of this permit to satisfy these non-numeric effluent limitations.

A. Erosion and Sediment Controls. You shall design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls shall be designed, installed and maintained to:

1. Control storm water volume and velocity within the site to minimize soil and stream erosion;

2. Control storm water discharges, including both peak flowrates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;

3. Minimize the amount of soil exposed during construction activity;

4. Minimize the disturbance of steep slopes;

5. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls shall address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting storm water runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;

6. If feasible, provide and maintain a 50-foot undisturbed natural buffer around surface waters of the state, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration. If it is infeasible to provide and maintain an undisturbed 50-foot natural buffer, you shall comply with the stabilization requirements found in Part II.B for areas within 50 feet of a surface water; and

7. Minimize soil compaction and, unless infeasible, preserve topsoil.

B. Soil Stabilization. Stabilization of disturbed areas shall, at a minimum, be initiated in accordance with the time frames specified in the following tables.

Table 1: Permanent Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or more	Within seven days of the most recent disturbance
Any areas within 50 feet of a surface water of the state and at final grade	Within two days of reaching final grade
Other areas at final grade	Within seven days of reaching final grade within that area

Table 2: Temporary Stabilization

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a surface water of the state and not at final grade	Within two days of the most recent disturbance if the area will remain idle for more than 14 days
Any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the state	Within seven days of the most recent disturbance within the area For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s).
Disturbed areas that will be idle over winter	Prior to the onset of winter weather

Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. Permanent and temporary stabilization are defined in Part VII.

C. **Dewatering.** Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.

D. **Pollution Prevention Measures.** Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:

1. Minimize the discharge of pollutants from equipment and vehicle washing, wheel washwater, and other washwaters. Washwaters shall be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;

2. Minimize the exposure of construction materials, products, and wastes; landscape materials, fertilizers, pesticides, and herbicides; detergents, sanitary waste and other materials present on the site to precipitation and to storm water; and

3. Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

E. **Prohibited Discharges.** The following discharges are prohibited:

1. Wastewater from washout of concrete, unless managed by an appropriate control;

2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and

4. Soaps or solvents used in vehicle and equipment washing or all other waste water streams which could be subject to an individual NPDES permit (Part III.G.2.g).

F. **Surface Outlets**. When discharging from sediment basins utilize outlet structures that withdraw water from the surface, unless infeasible. (Note: Ohio EPA believes that the circumstances in which it is infeasible to design outlet structures in this manner are rare. Exceptions may include time periods with extended cold weather during winter months. If you have determined that it is infeasible to meet this requirement, you shall provide documentation in your SWP3 to support your determination.)

G. **Post-Construction Storm Water Management Controls**. So that receiving stream's physical, chemical and biological characteristics are protected, and stream functions are maintained, post-construction storm water practices shall provide long-term management of runoff quality and quantity.

PART III. STORM WATER POLLUTION PREVENTION PLAN (SWP3)

A. Storm Water Pollution Prevention Plans.

A SWP3 shall be developed for each site covered by this permit. For a multi-phase construction project, a separate NOI shall be submitted when a separate SWP3 will be prepared for

subsequent phases. SWP3s shall be prepared in accordance with sound engineering and/or conservation practices by a professional experienced in the design and implementation of standard erosion and sediment controls and storm water management practices addressing all phases of construction. The SWP3 shall clearly identify all activities which are required to be authorized under Section 401 and subject to an antidegradation review. The SWP3 shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction activities. The SWP3 shall be a comprehensive, stand-alone document, which is not complete unless it contains the information required by Part III.G of this permit. In addition, the SWP3 shall describe and ensure the implementation of best management practices (BMPs) that reduce the pollutants and impact of storm water discharges during construction and pollutants associated with the post-construction land use to ensure compliance with ORC Section 6111.04, OAC Chapter 3745-1 and the terms and conditions of this permit.

B. Timing.

An acceptable SWP3 shall be completed and submitted to the applicable regulated MS4 entity (for projects constructed entirely within a regulated MS4 area) prior to the timely submittal of an NOI. Projects within the Big Darby Creek and portions of the Olentangy watersheds must submit a SWP3 with the NOI. The SWP3 shall be updated in accordance with Part III.D. Submission of a SWP3 does not constitute review and approval on the part of Ohio EPA. Upon request and good cause shown, the director may waive the requirement to have a SWP3 completed at the time of NOI submission. If a waiver has been granted, the SWP3 must be completed prior to the initiation of construction activities. The SWP3 must be implemented upon initiation of construction activities.

In order to continue coverage from the previous generations of this permit, the permittee shall review and update the SWP3 to ensure that this permit's requirements are addressed within 180 days after the effective date of this permit. If it is infeasible for you to comply with a specific requirement in this permit because (1) the provision was not part of the permit you were previously covered under, and (2) because you are prevented from compliance due to the nature or location of earth disturbances that commenced prior to the effective date of this permit, you shall include documentation within your SWP3 of the reasons why it is infeasible for you to meet the specific requirement.

Examples of OHC000005 permit conditions that would be infeasible for permittees renewing coverage to comply with include:

- OHC000005 post-construction requirements, for projects that obtained NPDES construction storm water coverage and started construction activities prior to the effective date of this permit;

- OHC000005 post-construction requirements, for multi-phase development projects with an existing regional post-construction BMP issued under previous NPDES post-construction requirements. This only applies to construction sites authorized under Ohio EPA's Construction Storm Water Permits issued after April 20, 2003;

- OHC000005 post-construction requirements, for renewing or initial coverage and you have a SWP3 approved locally and you will start construction within 180 days of the effective date of this permit;

- Sediment settling pond design requirements, if the general permit coverage was obtained prior to April 21, 2013 and the sediment settling pond has been installed; or

- Case-by-case situations approved by the Director.

C. SWP3 Signature and Review.

1. Plan Signature and Retention On-Site. The SWP3 shall include the certification in Part V.H, be signed in accordance with Part V.G., and be retained on site during working hours.

2. Plan Availability

   a. On-site: The plan shall be made available immediately upon request of the director or his authorized representative and MS4 operators or their authorized representative during working hours. A copy of the NOI and letter granting permit coverage under this general permit also shall be made available at the site.

   b. By written request: The permittee must provide the most recent copy of the SWP3 within 7 days upon written request by any of the following:

      i. The director or the director's authorized representative;

      ii. A local agency approving sediment and erosion plans, grading plans or storm water management plans; or

      iii. In the case of a storm water discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the operator of the system.

   c. To the public: All NOIs, general permit approval for coverage letters, and SWP3s are considered reports that shall be available to the public in accordance with the Ohio Public Records law. The permittee shall make documents available to the public upon request or provide a copy at public expense, at cost, in a timely manner. However, the permittee may claim to Ohio EPA any portion of an SWP3 as confidential in accordance with Ohio law.

3. Plan Revision. The director or authorized representative may notify the permittee at any time that the SWP3 does not meet one or more of the minimum requirements of this part. Within 10 days after such notification from the director or authorized representative (or as otherwise provided in the notification), the permittee shall make the required changes to the SWP3 and shall submit to Ohio EPA the revised SWP3 or a written certification that the requested changes have been made.

D. Amendments.

The permittee shall amend the SWP3 whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the state or if the SWP3 proves to be ineffective in achieving the

general objectives of controlling pollutants in storm water discharges associated with construction activity. Amendments to the SWP3 may be reviewed by Ohio EPA in the same manner as Part III.C.

E. Duty to inform contractors and subcontractors.

The permittee shall inform all contractors and subcontractors not otherwise defined as "operators" in Part VII of this general permit who will be involved in the implementation of the SWP3 of the terms and conditions of this general permit. The permittee shall maintain a written document containing the signatures of all contractors and subcontractors involved in the implementation of the SWP3 as proof acknowledging that they reviewed and understand the conditions and responsibilities of the SWP3. The written document shall be created, and signatures shall be obtained prior to commencement of earth disturbing activity on the construction site.

F. Total Maximum Daily Load (TMDL) allocations.

If a TMDL is approved for any waterbody into which the permittee's site discharges and requires specific BMPs for construction sites, the director may require the permittee to revise his/her SWP3. Specific conditions have been provided in Appendix A (for the Big Darby Creek Watershed) and Appendix B (for portions of the Olentangy river watershed).

G. SWP3 Requirements.

Operations that discharge storm water from construction activities are subject to the following requirements and the SWP3 shall include the following items:

1. Site description. Each SWP3 shall provide:

    a. A description of the nature and type of the construction activity (e.g., low density residential, shopping mall, highway, etc.);

    b. Total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavation, filling or grading, including off-site borrow areas);

    c. A measure of the impervious area and percent imperviousness created by the construction activity (existing, new and total impervious area after construction);

    d. Storm water calculations, including the volumetric runoff coefficients for both the pre-construction and post- construction site conditions, and resulting water quality volume; design details for post-construction storm water facilities and pretreatment practices such as contributing drainage areas, capacities, elevations, outlet details and drain times shall be included in the SWP3; and if applicable, explanation of the use of existing post-construction facilities. Ohio EPA recommends the use of data sheets (see Ohio's Rainwater and Land Development manual and Ohio EPA resources for examples);

    e. Existing data describing the soil and, if available, the quality of any discharge from the site;

f. A description of prior land uses at the site;

g. A description of the condition of any on-site streams (e.g. prior channelization, bed instability or headcuts, channels on public maintenance, or natural channels);

h. An implementation schedule which describes the sequence of major construction operations (i.e., designation of vegetative preservation areas, grubbing, excavating, grading, utilities, infrastructure installation and others) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence;

i. The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water(s) and the areal extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed, or which will receive discharges from disturbed areas of the project. For discharges to an MS4, the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a stream or surface water of the state shall be indicated;

j. For subdivided developments, a detail drawing of individual parcels with their erosion, sediment or storm water control practices and/or a typical individual lot showing standard individual lot erosion and sediment control practices.

   A typical individual lot drawing does not remove the responsibility to designate specific erosion and sediment control practices in the SWP3 for critical areas such as steep slopes, stream banks, drainage ways and riparian zones;

k. Location and description of any storm water discharges associated with dedicated asphalt and dedicated concrete plants covered by this permit and the best management practices to address pollutants in these storm water discharges;

l. A cover page or title identifying the name and location of the site, the name and contact information of all construction site operators, the name and contact information for the person responsible for authorizing and amending the SWP3, preparation date, and the estimated dates that construction will start and be complete;

m. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence; and

n. Site map showing:

   i. Limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate NOI and associated SWP3;

   ii. Soils types for all areas of the site, including locations of unstable or highly erodible and/or known contaminated soils;

iii. Existing and proposed contours. A delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres;

iv. The location of any delineated boundary for required riparian setbacks;

v. Conservation easements or areas designated as open space, preserved vegetation or otherwise protected from earth disturbing activities. A description of any associated temporary or permanent fencing or signage;

vi. Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the permittee intends to fill or relocate for which the permittee is seeking approval from the Army Corps of Engineers and/or Ohio EPA;

vii. Existing and planned locations of buildings, roads, parking facilities and utilities;

viii. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during site development;

ix. Sediment traps and basins noting their sediment storage and dewatering (detention) volume and contributing drainage area. Ohio EPA recommends the use of data sheets (see Ohio EPA's Rainwater and Land Development manual and website for examples) to provide data for all sediment traps and basins noting important inputs to design and resulting parameters such as their contributing drainage area, disturbed area, detention volume, sediment storage volume, practice surface area, dewatering time, outlet type and dimensions;

x. The location of permanent storm water management practices (new and existing) including pretreatment practices to be used to control pollutants in storm water after construction operations have been completed along with the location of existing and planned drainage features including catch basins, culverts, ditches, swales, surface inlets and outlet structures;

xi. Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling;

xii. The location of designated construction entrances where the vehicles will access the construction site; and

xiii. The location of any areas of proposed floodplain fill, floodplain excavation, stream restoration or known temporary or permanent stream crossings.

2. Controls. In accordance with Part II.A, the SWP3 shall contain a description of the controls appropriate for each construction operation covered by this permit and the operator(s) shall implement such controls. The SWP3 shall clearly describe for each major construction activity identified in Part III.G.1.h: (a) appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and (b) which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization). The SWP3 shall identify the subcontractors engaged in activities that could impact storm water runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3. Ohio EPA recommends that the primary site operator review the SWP3 with the primary contractor prior to commencement of construction activities and keep a SWP3 training log to demonstrate that this review has occurred.

   Ohio EPA recommends that the erosion, sediment, and storm water management practices used to satisfy the conditions of this permit should meet the standards and specifications in the most current edition of Ohio's Rainwater and Land Development (see definitions) manual or other standards acceptable to Ohio EPA. The controls shall include the following minimum components:

   a. Preservation Methods. The SWP3 shall make use of practices which preserve the existing natural condition as much as feasible. Such practices may include: preserving existing vegetation, vegetative buffer strips, and existing soil profile and topsoil; phasing of construction operations to minimize the amount of disturbed land at any one time; and designation of tree preservation areas or other protective clearing or grubbing practices. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water.

   b. Erosion Control Practices. The SWP3 shall make use of erosion controls that provide cover over disturbed soils unless an exception is approved in accordance with Part III.G.4. A description of control practices designed to re-establish vegetation or suitable cover on disturbed areas after grading shall be included in the SWP3. The SWP3 shall provide specifications for stabilization of all disturbed areas of the site and provide guidance as to which method of stabilization will be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, use of construction entrances and the use of alternative ground cover.

      i. **Stabilization.** Disturbed areas shall be stabilized in accordance with Table 1 (Permanent Stabilization) and Table 2 (Temporary Stabilization) in Part II.B of this permit.

      ii. **Permanent stabilization of conveyance channels**. Operators shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding (as defined in the most current edition of the Rainwater and Land

Development manual), mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques or rock check dams.

c. Runoff Control Practices. The SWP3 shall incorporate measures which control the flow of runoff from disturbed areas so as to prevent erosion from occurring. Such practices may include rock check dams, pipe slope drains, diversions to direct flow away from exposed soils and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.

d. Sediment Control Practices. The plan shall include a description of structural practices that shall store runoff allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, sediment barriers, earth diversion dikes or channels which direct runoff to a sediment settling pond and storm drain inlet protection. All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless those are used in conjunction with a sediment settling pond.

The SWP3 shall contain detail drawings for all structural practices.

i. **Timing.** Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers shall be implemented prior to grading and within seven days from the start of grubbing. They shall continue to function until the upslope development area is stabilized with permanent cover. As construction progresses and the topography is altered, appropriate controls shall be constructed, or existing controls altered to address the changing drainage patterns.

ii. **Sediment settling ponds.** A sediment settling pond is required for any one of the following conditions:

- Concentrated or collected storm water runoff (e.g., storm sewer or ditch);
- Runoff from drainage areas, which exceed the design capacity of silt fence or other sediment barriers; or
- Runoff from drainage areas that exceed the design capacity of inlet protection.

The permittee may request approval from Ohio EPA to use alternative controls if the permittee can demonstrate the alternative controls are equivalent in effectiveness to a sediment settling pond.

In accordance with Part II.F, if feasible, sediment settling ponds shall be dewatered at the pond surface using a skimmer or equivalent device. The sediment settling pond volume consists of both a dewatering zone and a sediment storage zone. The volume of the dewatering zone shall be a minimum of 1800 cubic feet (ft^3) per acre of drainage (67 yd^3/acre) with a minimum 48-hour drain time. The volume of the sediment storage zone shall be calculated by one of the following methods:

Method 1: The volume of the sediment storage zone shall be 1000 ft^3 per disturbed acre within the watershed of the basin. OR

Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with RUSLE or a similar generally accepted erosion prediction model.

Accumulated sediment shall be removed from the sediment storage zone once it exceeds 50 percent of the minimum required sediment storage design capacity and prior to the conversion to the post-construction practice unless suitable storage is demonstrated based upon over-design. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity shall be included unless runoff from these areas is diverted away from the sediment settling pond and is not co-mingled with sediment-laden runoff. The depth of the dewatering zone shall be less than or equal to five feet. The configuration between inlets and the outlet of the basin shall provide at least two units of length for each one unit of width (≥ 2:1 length:width ratio); however, a length to width ratio of 4:1 is recommended. When designing sediment settling ponds, the permittee shall consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls shall be used where site limitations would preclude a safe design. Combining multiple sediment and erosion control measures in order to maximize pollutant removal is encouraged.

iii. **Sediment Barriers and Diversions.** Sheet flow runoff from denuded areas shall be intercepted by sediment barriers or diversions to protect adjacent properties and water resources from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour downslope of the disturbed area. For most applications, standard silt fence may be substituted with a 12-inch diameter sediment barrier. The relationship between the maximum drainage area to sediment barrier for a particular slope range is shown in the following table:

Table 3 Sediment Barrier Maximum Drainage Area Based on Slope

Maximum drainage area (in acres) to 100 linear feet of sediment barrier	Range of slope for a particular drainage area (in percent)
0.5	< 2%
0.25	≥ 2% but < 20%
0.125	≥ 20% but < 50%

Placing sediment barriers in a parallel series does not extend the size of the drainage area. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Diversion practices, which include swales, dikes or berms, may receive storm water runoff from areas up to 10 acres.

iv. **Inlet Protection.** Other erosion and sediment control practices shall minimize sediment laden water entering active storm drain systems. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond.

v. **Surface Waters of the State Protection.** If construction activities disturb areas adjacent to surface waters of the state, structural practices shall be designed and implemented on site to protect all adjacent surface waters of the state from the impacts of sediment runoff. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) shall be used in a surface water of the state. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water. Where impacts within this buffer area are unavoidable, due to the nature of the construction (e.g., stream crossings for roads or utilities), the project shall be designed such that the number of stream crossings and the width of the disturbance within the buffer area are minimized.

vi. **Modifying Controls**. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the permittee shall replace or modify the control for site conditions.

e. Post-Construction Storm Water Management Requirements. So that receiving stream's physical, chemical and biological characteristics are protected, and stream functions are maintained, post-construction storm water practices shall provide long-term management of runoff quality and quantity. To meet the post-construction requirements of this permit, the SWP3 shall contain a description of the post-construction BMPs that will be installed during construction for the site and the rationale for their selection. The rationale shall address the anticipated impacts on the channel and floodplain morphology, hydrology, and water quality. Post-construction BMPs cannot be installed within a surface water of the state (e.g., wetland or stream) unless it is authorized by a CWA 401 water quality certification, CWA 404 permit, or Ohio EPA non-jurisdictional wetland/stream program approval. Note: local jurisdictions may have more stringent post-construction requirements.

Detail drawings and maintenance plans shall be provided for all post-construction BMPs in the SWP3. Maintenance plans shall be provided by the permittee to the post-construction operator of the site (including homeowner associations) upon completion of construction activities (prior to termination of permit coverage). Maintenance plans shall ensure that pollutants collected within structural post-construction practices are disposed of in accordance with local, state, and federal regulations. To ensure that storm water management systems function as

designed and constructed, the post-construction operation and maintenance plan shall be a stand-alone document which contains: (1) a designated entity for storm water inspection and maintenance responsibilities; (2) the routine and non-routine maintenance tasks to be undertaken; (3) a schedule for inspection and maintenance; (4) any necessary legally binding maintenance easements and agreements; (5) construction drawings or excerpts showing the plan view, profile and details of the outlet(s); (6) a map showing all access and maintenance easements; and (7) for table 4a/4b practices, provide relevant elevations and associated volumes that dictate when removal of accumulated sediments must occur. Permittees are responsible for assuring all post-construction practices meet plan specifications and intended post-construction conditions have been met (e.g., sediment removed from, and sediment storage restored to, permanent pools, sediment control outlets removed and replaced with permanent post-construction discharge structures, and all slopes and drainageways permanently stabilized), but are not responsible under this permit for operation and maintenance of post-construction practices once coverage under this permit is terminated.

Post-construction storm water BMPs that discharge pollutants from point sources once construction is completed may in themselves need authorization under a separate NPDES permit (one example is storm water discharges from regulated industrial sites).

Construction activities that do not include the installation of any impervious surface (e.g., park lands), abandoned mine land reclamation activities regulated by the Ohio Department of Natural Resources, stream and wetland restoration activities, and wetland mitigation activities are not required to comply with the conditions of Part III.G.2.e of this permit. Linear construction projects (e.g., pipeline or utility line installation) which do not result in the installation of additional impervious surface are not required to comply with the conditions of Part III.G.2.e of this permit. However, linear construction projects shall be designed to minimize the number of stream crossings and the width of disturbance, and to achieve final stabilization of the disturbed area as defined in Part VII.M.1.

For all construction activities that will disturb two or more acres of land or will disturb less than two acres that are part of a larger common plan of development or sale which will disturb two or more acres of land, the post construction BMP(s) chosen shall be able to manage storm water runoff for protection of stream channels, stream stability, and water quality. The BMP(s) chosen must be compatible with site and soil conditions. Structural post-construction storm water treatment practices shall be incorporated into the permanent drainage system for the site. The BMP(s) chosen must be sized to treat the water quality volume (WQ_v) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The WQ_v shall be equivalent to the volume of runoff from a 0.90-inch rainfall and shall be determined using the following equations:

$$WQ_v = Rv * P * A / 12 \quad \text{(Equation 1)}$$

where:
WQ_v = water quality volume in acre-feet
Rv = the volumetric runoff coefficient calculated using equation 2
P = 0.90 inch precipitation depth
A = area draining into the BMP in acres

$$Rv = 0.05 + 0.9i \quad \text{(Equation 2)}$$

where i = fraction of post-construction impervious surface

An additional volume equal to 20 percent of the WQ_v shall be incorporated into the BMP for sediment storage. Ohio EPA recommends BMPs be designed according to the methodology described in the most current edition of the Rainwater and Land Development manual or in another design manual acceptable for use by Ohio EPA.

The BMPs listed in Tables 4a and 4b below are considered standard BMPs approved for general use. However, communities with a regulated MS4 may limit the use of some of these BMPs. BMPs shall be designed such that the drain time is long enough to provide treatment but short enough to provide storage for successive rainfall events and avoid the creation of nuisance conditions. The outlet structure for the post-construction BMP shall not discharge more than the first half of the WQv in less than one-third of the drain time. The WQv is the volume of storm water runoff that must be detained by a post-construction practice as specified by the most recent edition of the Rainwater and Land Development manual.

Post-construction practices shall be sized to treat 100% of the WQv associated with their contributing drainage area. If there is an existing post-construction BMP that treats runoff from the disturbed area and the BMP meets the post-construction requirements of this permit, no additional post-construction BMP will be required. A regional storm water BMP may be used to meet the post-construction requirement if: (1) the BMP meets the design requirements for treating the WQv; and (2) a legal agreement is established through which the regional BMP owner or operator agrees to provide this service in the long term. Design information for such facilities such as contributing drainage areas, capacities, elevations, outlet details and drain times shall be included in the SWP3.

Table 4a Extended Detention Post-Construction Practices with Minimum Drain Times

Extended Detention Practices	Minimum Drain Time of WQv
Wet Extended Detention Basin[1,2]	24 hours
Constructed Extended Detention Wetland[1,2]	24 hours
Dry Extended Detention Basin[1,3]	48 hours
Permeable Pavement – Extended Detention[1]	24 hours
Underground Storage – Extended Detention[1,4]	24 hours
Sand & Other Media Filtration - Extended Detention[1, 5]	24 hours

Notes:

1. The outlet structure shall not discharge more than the first half of the WQv in less than one-third of the drain time.
2. Provide a permanent pool with a minimum volume equal to the WQv and an extended detention volume above the permanent pool equal to 1.0 x WQv.
3. Dry basins must include a forebay and a micropool each sized at a minimum of 0.1 x WQv and a protected outlet, or include acceptable pretreatment and a protected outlet.
4. Underground storage must have pretreatment for removal of suspended sediments included in the design and documented in the SWP3. This pretreatment shall concentrate sediment in a location where it can be readily removed. For non-infiltrating, underground extended detention systems, pretreatment shall be 50% effective at capturing total suspended solids according to the testing protocol established in the Alternative Post-Construction BMP Testing Protocol.
5. The WQv ponding area shall completely empty between 24 and 72 hours.

Table 4b Infiltration Post-Construction Practices with Maximum Drain Times

Infiltration Practices	Maximum Drain Time of WQv
Bioretention Area/Cell[1,2]	24 hours
Infiltration Basin[2]	24 hours
Infiltration Trench[3]	48 hours
Permeable Pavement – Infiltration[3]	48 hours
Underground Storage – Infiltration[3,4]	48 hours

Notes:
1. Bioretention soil media shall have a permeability of approximately 1 – 4 in/hr. Meeting the soil media specifications in the Rainwater and Land Development manual is considered compliant with this requirement. Bioretention cells must have underdrains unless in-situ conditions allow for the WQv (surface ponding) plus the bioretention soil (to a depth of 24 inches) to drain completely within 48 hours.
2. Infiltrating practices with the WQv stored aboveground (bioretention, infiltration basin) shall fully drain the WQv within 24 hours to minimize nuisance effects of standing water and to promote vigorous communities of appropriate vegetation.
3. Subsurface practices designed to fully infiltrate the WQv (infiltration trench, permeable pavement with infiltration, underground storage with infiltration) shall empty within 48 hours to recover storage for subsequent storm events.
4. Underground storage systems with infiltration must have adequate pretreatment of suspended sediments included in the design and documented in the SWP3 in order to minimize clogging of the infiltrating surface. Pretreatment shall concentrate sediment in a location where it can be readily removed. Examples include media filters situated upstream of the storage or other suitable alternative approved by Ohio EPA. For infiltrating underground systems, pretreatment shall be 80% effective at capturing total suspended solids according to the testing protocol established in the Alternative Post-Construction BMP Testing Protocol.

Small Construction Activities. For all construction activities authorized under this permit which result in a disturbance less than 2 acres, a post-construction practice shall be used to treat storm water runoff for pollutants and to reduce adverse impacts on receiving waters. The applicant must provide a justification in the SWP3 why the use of table 4a and 4b practices are not feasible. The justification must address limiting factors which would prohibit the project going forward should table 4a and 4b practices be required. Please note that additional practices selected will require approval from the regulated MS4. The use of green infrastructure BMPs such as runoff reducing practices is also encouraged.

Transportation Projects. The construction of new roads and roadway improvement projects by public entities (i.e., the state, counties, townships, cities, or villages) may implement post-construction BMPs in compliance with the current version (as of the effective date of this permit) of the Ohio Department of Transportation's "Location and Design Manual, Volume Two Drainage Design" that has been accepted by Ohio EPA as an alternative to the conditions of this permit.

Offsite Mitigation of Post-Construction. Ohio EPA may authorize the offsite mitigation of the post-construction requirements of Part III.G.2.e of this permit on a case by case basis provided the permittee clearly demonstrates the BMPs listed in Tables 4a and 4b are not feasible and the following criteria are met: (1) a maintenance agreement or policy is established to ensure operations and treatment long-term; (2) the offsite location discharges to the same HUC-12 watershed unit; and (3) the mitigation ratio of the WQv is 1.5 to 1 or the WQv at the point of retrofit, whichever is greater. Requests for offsite mitigation must be received prior to receipt of the NOI application.

Previously Developed Areas - Ohio EPA encourages the redevelopment of previously graded, paved or built upon sites through a reduction of the WQv treatment requirement. For a previously developed area, one or a combination of the following two conditions shall be met:

- A 20 percent net reduction of the site's volumetric runoff coefficient through impervious area reduction with soil restoration or replacing impervious roof area with green roof area (for these purposes green roofs shall be considered pervious surface) or
- Treatment of 20 percent of the WQv for the previously developed area using a practice meeting Table 4a/4b criteria.

Where there is a combination of redeveloped areas and new development, a weighted approached shall be used with the following equation:

$$WQv = P * A * [(Rv_1*0.2) + (Rv_2 - Rv_1)] / 12 \qquad \text{(Equation 3)}$$

where

P = 0.90 inches
A = area draining into the BMP in acres
Rv_1 = volumetric runoff coefficient for existing conditions (current site impervious area)
Rv_2 = volumetric runoff coefficient for proposed conditions (post-construction site impervious area)

Post-construction practices shall be located to treat impervious areas most likely to generate the highest pollutant load, such as parking lots or roadways, rather than areas predicted to be cleaner such as rooftops.

Runoff Reduction Practices. The size of structural post-construction practices used to capture and treat the WQv can be reduced by incorporating runoff

reducing practices into the design of the site's drainage system. The approach to calculate and document runoff reduction is detailed in the Rainwater and Land Development Manual. BMP-specific runoff reduction volumes are set by specifications in the Rainwater and Land Development Manual for the following practices:

- Impervious surface disconnection
- Rainwater harvesting
- Bioretention
- Infiltration basin
- Infiltration trench
- Permeable pavement with infiltration
- Underground storage with infiltration
- Grass swale
- Sheet flow to filter strip
- Sheet flow to conservation area

A runoff reduction approach may be used to meet the groundwater recharge requirements in the Big Darby Creek Watershed. The runoff reduction practices used for groundwater recharge may be used to reduce the WQv requirement, see appendix A for details on groundwater recharge requirements.

In order to promote the implementation of green infrastructure, the Director may consider the use of runoff reducing practices to demonstrate compliance with Part III.G.2.e of this permit for areas of the site not draining into a common drainage system of the site, e.g., sheet flow from perimeter areas such as the rear yards of residential lots, low density development scenarios, or where the permittee can demonstrate that the intent of pollutant removal and stream protection, as required in Part III.G.2.e of this permit is being addressed through non-structural post-construction BMPs based upon review and approval by Ohio EPA.

Use of Alternative Post-Construction BMPs. This permit does not preclude the use of innovative or experimental post-construction storm water management technologies. Alternative post-construction BMPs shall previously have been tested to confirm storm water treatment efficacy equivalent to those BMPs listed in Tables 4a and 4b using the protocol described in this section. BMP testing may include laboratory testing, field testing, or both.

Permittees shall request approval from Ohio EPA to use alternative post-construction BMPs on a case-by-case basis. To use an alternative post-construction BMP, the permittee must demonstrate that use of a BMP listed in Tables 4a and 4b is not feasible and the proposed alternative post-construction BMP meets the minimum treatment criteria as described in this section. The permittee shall submit an application to Ohio EPA for any proposed alternative post-construction BMP. Where the development project is located within a regulated municipal separate storm sewer system (MS4) community, the use of an alternative practice requires pre-approval by the MS4 before submittal of the

Ohio EPA permit application. Ohio EPA requires that approvals for alternative post-construction BMPs are finalized before permittees submit an NOI for permit coverage.

In addition to meeting sediment removal criteria, the discharge rate from the proposed alternative practice shall be reduced to prevent stream bed erosion and protect the physical and biological stream integrity unless there will be negligible hydrological impact to the receiving surface water of the state. Discharge rate is considered to have a negligible impact if the permittee can demonstrate that one of the following three conditions exist:

i. The entire WQv is recharged to groundwater;
ii. The larger common plan of development or sale will create less than one acre of impervious surface;
iii. The storm water drainage system of the development discharges directly into a large river with drainage area equal to 100 square miles or larger upstream of the development site or to a lake where the development area is less than 5 percent of the watershed area, unless a TMDL has identified water quality problems into the receiving surface waters of the state.

If the conditions above that minimize the potential for hydrological impact to the receiving surface water of the state do not exist, then the alternative post-construction BMP must prevent stream erosion by reducing the flow rate from the WQ_V. In such cases, discharge of the WQ_V must be controlled. A second storm water BMP that provides extended detention of the WQv may be needed to meet the post-construction criteria.

Alternative Post-Construction BMP Testing Protocol. For laboratory testing, the alternative BMP shall be tested using sediment with a specific gravity of 2.65, a particle size distribution closely matching the distribution shown in Table 5, and total suspended sediment (TSS) concentrations within 10% of 200 mg/L (180 mg/L – 220 mg/L TSS). For an alternative BMP to be acceptable, the test results must demonstrate that the minimum treatment rate is 80% TSS removal at the design flow rate for the tested BMP.

Table 5 Particle Size Distribution for Testing Alternative Post-Construction BMPs

Particle Size (microns)	Percent Finer (%)
1,000	100
500	95
250	90
150	75
100	60
75	50
50	45
20	35
8	20
5	10
2	5

- For field testing, the alternative BMP shall be tested using storm water runoff

from the field, not altered by adding aggregate or subjecting to unusually high sediment loads such as those from unstabilized construction disturbance. The storm water runoff used for field testing shall be representative of runoff from the proposed installation site for the alternative BMP after all construction activities have ceased and the ground has been stabilized. The influent and effluent TSS concentrations of storm water runoff must be collected in the field. For an alternative BMP to be acceptable, the test results must demonstrate the minimum treatment rate is 80% TSS removal for influent concentrations equal to or greater than 100 mg/L TSS. If the influent concentration to the proposed alternative BMP is less than 100 mg/L TSS in the field, then the BMP must achieve an average effluent concentration less than or equal to 20 mg/L TSS.

- Testing of alternative post-construction BMPs shall be performed or overseen by a qualified independent, third-party testing organization;

- Testing shall demonstrate the maximum flow rate at which the alternative post-construction BMP can achieve the necessary treatment efficacy, including consideration for the potential of sediment resuspension;

- Testing shall demonstrate the maximum volume of sediment and floatables that can be collected in the alternative post-construction BMP before pollutants must be removed to maintain 80% treatment efficacy;

- Testing shall indicate the recommended maintenance frequency and maintenance protocol to ensure ongoing performance of the alternative post-construction BMP.

The alternative post-construction BMP testing protocol described in this section is similar to testing requirements specified by the New Jersey Department of Environmental Protection (NJDEP) for storm water Manufactured Treatment Devices (MTD) and therefore testing results certified by NJDEP shall be accepted by Ohio EPA. For examples of BMPs that have been tested using New Jersey Department of Environmental Protection's procedures, see the website: www.njstormwater.org.

Another nationally recognized storm water product testing procedure is the Technology Assessment Protocol – Ecology (TAPE) administered by the State of Washington, Department of Ecology. The TAPE testing procedure describes testing to achieve 80% TSS removal using a sediment mix with a particle size distribution with approximately 75% of the mass of the aggregate with particle diameters less than 45 microns. Overall, this particle size distribution is finer than the distribution in Table 5. Therefore, if TAPE testing results are available for a proposed alternative post-construction BMP, those results shall be accepted by Ohio EPA. The State of Washington, Department of Ecology website is https://ecology.wa.gov/.

Alternative BMPs that utilize treatment processes such as filtering or centrifugal separation, rather than a detention and settling volume, must be designed to ensure treatment of 90 percent of the average annual runoff

volume. For the design of these BMPs, the water quality flow rate (WQF) considered equivalent to the Water Quality Volume (WQv) shall be determined utilizing the Rational Method (Equation 4) with an intensity (i) appropriate for the water quality precipitation event. This intensity shall be calculated using the table given in Appendix C.

$$WQF = C * i * A \qquad \text{(Equation 4)}$$

Where

WQF = water quality flow rate in cubic feet per second (cfs)
C = rational method runoff coefficient
i = intensity (in/hr)
A = area draining to the BMP (acres)

Alternative post-construction BMPs may include, but are not limited to: vegetated swales, vegetated filter strips, hydrodynamic separators, high-flow media filters, cartridge filters, membrane filters, subsurface flow wetlands, multi-chamber treatment trains, road shoulder media filter drains, wetland channels, rain barrels, green roofs, and rain gardens. The Director may also consider non-structural post-construction approaches.

f. Surface Water Protection. If the project site contains any streams, rivers, lakes, wetlands or other surface waters, certain construction activities at the site may be regulated under the CWA and/or state isolated wetland permit requirements. Sections 404 and 401 of the Act regulate the discharge of dredged or fill material into surface waters and the impacts of such activities on water quality, respectively. Construction activities in surface waters which may be subject to CWA regulation and/or state isolated wetland permit requirements include, but are not limited to: sewer line crossings, grading, backfilling or culverting streams, filling wetlands, road and utility line construction, bridge installation and installation of flow control structures. If the project contains streams, rivers, lakes or wetlands or possible wetlands, the permittee shall contact the appropriate U.S. Army Corps of Engineers District Office. (CAUTION: Any area of seasonally wet hydric soil is a potential wetland - please consult the Soil Survey and list of hydric soils for your County, available at your county's Soil and Water Conservation District. If you have any questions about Section 401 water quality certification, please contact the Ohio Environmental Protection Agency, Section 401 Coordinator.)

U.S. Army Corps of Engineers (Section 404 regulation):

- Huntington, WV District (304) 399-5210 (Muskingum River, Hocking River, Scioto River, Little Miami River, and Great Miami River Basins)
- Buffalo, NY District (716) 879-4330 (Lake Erie Basin)
- Pittsburgh, PA District (412) 395-7155 (Mahoning River Basin)
- Louisville, KY District (502) 315-6686 (Ohio River)

Ohio EPA 401/404 and non-jurisdictional stream/wetland coordinator can be contacted at (614) 644-2001 (all of Ohio)

Concentrated storm water runoff from BMPs to natural wetlands shall be converted to diffuse flow before the runoff enters the wetlands. The flow should be released such that no erosion occurs downslope. Level spreaders may need to be placed in series, particularly on steep sloped sites, to ensure non-erosive velocities. Other structural BMPs may be used between storm water features and natural wetlands, in order to protect the natural hydrology, hydroperiod, and wetland flora. If the applicant proposes to discharge to natural wetlands, a hydrologic analysis shall be performed. The applicant shall attempt to match the pre-development hydroperiods and hydrodynamics that support the wetland. The applicant shall assess whether their construction activity will adversely impact the hydrologic flora and fauna of the wetland. Practices such as vegetative buffers, infiltration basins, conservation of forest cover, and the preservation of intermittent streams, depressions, and drainage corridors may be used to maintain wetland hydrology.

g. Other controls.

i. **Non-Sediment Pollutant Controls.** In accordance with Part II.E, no solid (other than sediment) or liquid waste, including building materials, shall be discharged in storm water runoff. The permittee must implement all necessary BMPs to prevent the discharge of non-sediment pollutants to the drainage system of the site or surface waters of the state or an MS4. Under no circumstance shall wastewater from the washout of concrete trucks, stucco, paint, form release oils, curing compounds, and other construction materials be discharged directly into a drainage channel, storm sewer or surface waters of the state. Also, no pollutants from vehicle fuel, oils, or other vehicle fluids can be discharged to surface waters of the state. No exposure of storm water to waste materials is recommended. The SWP3 must include methods to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste to precipitation, storm water runoff, and snow melt. In accordance with Part II.D.3, the SWP3 shall include measures to prevent and respond to chemical spills and leaks. You may also reference the existence of other plans (i.e., Spill Prevention Control and Countermeasure (SPCC) plans, spill control programs, Safety Response Plans, etc.) provided that such plan addresses conditions of this permit condition and a copy of such plan is maintained on site.

ii. **Off-site traffic.** Off-site vehicle tracking of sediments and dust generation shall be minimized. In accordance with Part II.D.1, the SWP3 shall include methods to minimize the discharge of pollutants from equipment and vehicle washing, wheel washwater, and other washwaters. No detergents may be used to wash vehicles. Washwaters shall be treated in a sediment basin or alternative control that provides equivalent treatment prior to discharge.

iii. **Compliance with other requirements.** The SWP3 shall be consistent with applicable State and/or local waste disposal, sanitary sewer or septic system regulations, including provisions prohibiting waste disposal by

open burning and shall provide for the proper disposal of contaminated soils to the extent these are located within the permitted area.

iv. **Trench and ground water control**. In accordance with Part II.C, there shall be no turbid discharges to surface waters of the state resulting from dewatering activities. If trench or ground water contains sediment, it shall pass through a sediment settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.

v. **Contaminated Sediment.** Where construction activities are to occur on sites with contamination from previous activities, operators shall be aware that concentrations of materials that meet other criteria (is not considered a Hazardous Waste, meeting VAP standards, etc.) may still result in storm water discharges in excess of Ohio Water Quality Standards. Such discharges are not authorized by this permit. Appropriate BMPs include, but are not limited to:

- The use of berms, trenches, and pits to collect contaminated runoff and prevent discharges;
- Pumping runoff into a sanitary sewer (with prior approval of the sanitary sewer operator) or into a container for transport to an appropriate treatment/disposal facility; and
- Covering areas of contamination with tarps or other methods that prevent storm water from coming into contact with the material.

Operators should consult with Ohio EPA Division of Surface Water prior to seeking permit coverage.

h. Maintenance. All temporary and permanent control practices shall be maintained and repaired as needed to ensure continued performance of their intended function. All sediment control practices must be maintained in a functional condition until all up-slope areas they control are permanently stabilized. The SWP3 shall be designed to minimize maintenance requirements. The applicant shall provide a description of maintenance procedures needed to ensure the continued performance of control practices.

i. Inspections. The permittee shall assign “qualified inspection personnel” to conduct inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate and properly implemented in accordance with the schedule proposed in Part III.G.1.h of this permit or whether additional control measures are required. At a minimum, procedures in a SWP3 shall provide that all controls on the site are inspected:

- after any storm event greater than one-half inch of rain per 24-hour period by the end of the next calendar day, excluding weekends and holidays unless work is scheduled; and
- once every seven calendar days.

The inspection frequency may be reduced to at least once every month for dormant sites if:

- the entire site is temporarily stabilized or
- runoff is unlikely due to weather conditions for extended periods of time (e.g., site is covered with snow, ice, or the ground is frozen).

The beginning and ending dates of any reduced inspection frequency shall be documented in the SWP3.
Once a definable area has achieved final stabilization, the area may be marked on the SWP3 and no further inspection requirements shall apply to that portion of the site.

Following each inspection, a checklist must be completed and signed by the qualified inspection personnel representative. At a minimum, the inspection report shall include:

i. the inspection date;
ii. names, titles, and qualifications of personnel making the inspection;
iii. weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
iv. weather information and a description of any discharges occurring at the time of the inspection;
v. location(s) of discharges of sediment or other pollutants from the site;
vi. location(s) of BMPs that need to be maintained;
vii. location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
viii. location(s) where additional BMPs are needed that did not exist at the time of inspection; and
ix. corrective action required including any changes to the SWP3 necessary and implementation dates.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of or the potential for pollutants entering the drainage system. Erosion and sediment control measures identified in the SWP3 shall be observed to ensure that those are operating correctly. Discharge locations shall be inspected to ascertain whether erosion and sediment control measures are effective in preventing significant impacts to the receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking.

The permittee shall maintain for three years following the submittal of a notice of termination form, a record summarizing the results of the inspection, names(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWP3 and a certification as to whether the facility is in compliance with the SWP3 and the permit and identify any incidents of non-compliance. The record and certification shall be signed in accordance with Part V.G. of this permit.

i. **When practices require repair or maintenance.** If the inspection reveals that a control practice is in need of repair or maintenance, with the exception of a sediment settling pond, it shall be repaired or maintained within 3 days of the inspection. Sediment settling ponds shall be repaired or maintained within 10 days of the inspection.

ii. **When practices fail to provide their intended function.** If the inspection reveals that a control practice fails to perform its intended function and that another, more appropriate control practice is required, the SWP3 shall be amended and the new control practice shall be installed within 10 days of the inspection.

iii. **When practices depicted on the SWP3 are not installed.** If the inspection reveals that a control practice has not been implemented in accordance with the schedule contained in Part III.G.1.h of this permit, the control practice shall be implemented within 10 days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record shall contain a statement of explanation as to why the control practice is not needed.

3. Approved State or local plans. All dischargers regulated under this general permit must comply, except those exempted under state law, with the lawful requirements of municipalities, counties and other local agencies regarding discharges of storm water from construction activities. All erosion and sediment control plans and storm water management plans approved by local officials shall be retained with the SWP3 prepared in accordance with this permit. Applicable requirements for erosion and sediment control and storm water management approved by local officials are, upon submittal of a NOI form, incorporated by reference and enforceable under this permit even if they are not specifically included in an SWP3 required under this permit. When the project is located within the jurisdiction of a regulated municipal separate storm sewer system (MS4), the permittee shall certify that the SWP3 complies with the requirements of the storm water management program of the MS4 operator.

4. Exceptions. If specific site conditions prohibit the implementation of any of the erosion and sediment control practices contained in this permit or site-specific conditions are such that implementation of any erosion and sediment control practices contained in this permit will result in no environmental benefit, then the permittee shall provide justification for rejecting each practice based on site conditions. Exceptions from implementing the erosion and sediment control standards contained in this permit will be approved or denied on a case-by-case basis.

The permittee may request approval from Ohio EPA to use alternative methods to satisfy conditions in this permit if the permittee can demonstrate that the alternative methods are sufficient to protect the overall integrity of receiving streams and the watershed. Alternative methods will be approved or denied on a case-by-case basis.

PART IV. NOTICE OF TERMINATION REQUIREMENTS

A. Failure to notify.

The terms and conditions of this permit shall remain in effect until a signed Notice of Termination (NOT) form is submitted. Failure to submit an NOT constitutes a violation of this permit and may affect the ability of the permittee to obtain general permit coverage in the future.

B. When to submit an NOT.

1. Permittees wishing to terminate coverage under this permit shall submit an NOT form in accordance with Part V.G. of this permit. Compliance with this permit is required until an NOT form is submitted. The permittee's authorization to discharge under this permit terminates at midnight of the day the NOT form is submitted. Prior to submitting the NOT form, the permittee shall conduct a site inspection in accordance with Part III.G.2.i of this permit and have a maintenance plan in place to ensure all post-construction BMPs will be maintained in perpetuity.

2. All permittees shall submit an NOT form within 45 days of completing all permit requirements. Enforcement actions may be taken if a permittee submits an NOT form without meeting one or more of the following conditions:

    a. Final stabilization (see definition in Part VII) has been achieved on all portions of the site for which the permittee is responsible (including, if applicable, returning agricultural land to its pre-construction agricultural use);

    b. Another operator(s) has assumed control over all areas of the site that have not been finally stabilized;

    c. A maintenance plan is in place to ensure all post construction BMPs are adequately maintained in the long-term;

    d. For non-residential developments, all elements of the storm water pollution prevention plan have been completed, the disturbed soil at the identified facility have been stabilized and temporary erosion and sediment control measures have been removed at the appropriate time, or all storm water discharges associated with construction activity from the identified facility that are authorized by the above referenced NPDES general permit have otherwise been eliminated. (i)For residential developments only, temporary stabilization has been completed and the lot, which includes a home, has been transferred to the homeowner; (ii) final stabilization has been completed and the lot, which does not include a home, has been transferred to the property owner; (iii) no stabilization has been implemented on a lot, which includes a home, and the lot has been transferred to the homeowner; or

e. An exception has been granted under Part III.G.4.

C. How to submit an NOT.

To terminate permit coverage, the permitee shall submit a complete and accurate Notice of Termination (NOT) form using Ohio EPA's electronic application form which is available through the Ohio EPA eBusiness Center at: https://ebiz.epa.ohio.gov/. Submission through the Ohio EPA eBusiness Center will require establishing an Ohio EPA eBusiness Center account and obtaining a unique Personal Identification Number (PIN) for final submission of the NOT. Existing eBusiness Center account holders can access the NOT form through their existing account and submit using their existing PIN. Please see the following link for guidance: **http://epa.ohio.gov/dsw/ebs.aspx#170669803-streams-guidance**. Alternatively, if you are unable to access the NOT form through the agency eBusiness Center due to a demonstrated hardship, the NOT may be submitted on paper NOT forms provided by Ohio EPA. NOT information shall be typed on the form. Please contact Ohio EPA, Division of Surface Water at (614) 644-2001 if you wish to receive a paper NOT form.

PART V. STANDARD PERMIT CONDITIONS.

A. Duty to comply.

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of ORC Chapter 6111 and is grounds for enforcement action.

Ohio law imposes penalties and fines for persons who knowingly make false statements or knowingly swear or affirm the truth of a false statement previously made.

B. Continuation of an expired general permit.

An expired general permit continues in force and effect until a new general permit is issued.

C. Need to halt or reduce activity not a defense.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to mitigate.

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty to provide information.

The permittee shall furnish to the director, within 10 days of written request, any information which the director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee

shall also furnish to the director upon request copies of records required to be kept by this permit.

F. Other information.

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI, SWP3, NOT or in any other report to the director, he or she shall promptly submit such facts or information.

G. Signatory requirements.

All NOIs, NOTs, SWP3s, reports, certifications or information either submitted to the director or that this permit requires to be maintained by the permittee, shall be signed.

1. These items shall be signed as follows:

    a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

        i. A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision-making functions for the corporation; or

        ii. The manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

    b. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

    c. For a municipality, State, Federal or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).

2. All reports required by the permits and other information requested by the director shall be signed by a person described in Part V.G.1 of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Part V.G.1 of this permit and submitted to the director;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator of a well or well field, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

c. The written authorization is submitted to the director.

3. Changes to authorization. If an authorization under Part V.G.2 of this permit is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.G.2 of this permit must be submitted to the director prior to or together with any reports, information or applications to be signed by an authorized representative.

H. Certification.

Any person signing documents under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I. Oil and hazardous substance liability.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the CWA or 40 CFR Part 112. 40 CFR Part 112 establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable surface waters of the state or adjoining shorelines.

J. Property rights.

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

K. Severability.

The provisions of this permit are severable and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

L. Transfers.

Ohio NPDES general permit coverage is transferable. Ohio EPA must be notified in writing sixty days prior to any proposed transfer of coverage under an Ohio NPDES general permit. The transferee must inform Ohio EPA it will assume the responsibilities of the original permittee transferor.

M. Environmental laws.

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

N. Proper operation and maintenance.

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of SWP3s. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

O. Inspection and entry.

The permittee shall allow the director or an authorized representative of Ohio EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment); and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

P. Duty to Reapply.

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

Q. Permit Actions.

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

R. Bypass.

The provisions of 40 CFR Section 122.41(m), relating to "Bypass," are specifically incorporated herein by reference in their entirety. For definition of "Bypass," see Part VII.C.

S. Upset.

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "Upset," see Part VII.GG.

T. Monitoring and Records.

The provisions of 40 CFR Section 122.41(j), relating to "Monitoring and Records," are specifically incorporated herein by reference in their entirety.

U. Reporting Requirements.

The provisions of 40 CFR Section 122.41(l), relating to "Reporting Requirements," are specifically incorporated herein by reference in their entirety.

PART VI. REOPENER CLAUSE

If there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with construction activity covered by this permit, the permittee of such discharge may be required to obtain coverage under an individual permit or an alternative general permit in accordance with Part I.C of this permit or the permit may be modified to include different limitations and/or requirements.

Permit modification or revocation will be conducted according to ORC Chapter 6111.

PART VII. DEFINITIONS

A. "Act" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117 and Pub. L. 100-4, 33 U.S.C. 1251 et. seq.

B. "Bankfull channel" means a channel flowing at channel capacity and conveying the bankfull discharge. Delineated by the highest water level that has been maintained for a sufficient period of time to leave evidence on the landscape, such as the point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial or

the point at which the clearly scoured substrate of the stream ends and terrestrial vegetation begins.

C. "Bankfull discharge" means the streamflow that fills the main channel and just begins to spill onto the floodplain; it is the discharge most effective at moving sediment and forming the channel.

D. "Best management practices (BMPs)" means schedules of activities, prohibitions of practices, maintenance procedures and other management practices (both structural and non-structural) to prevent or reduce the pollution of surface waters of the state. BMP's also include treatment requirements, operating procedures and practices to control plant and/or construction site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage.

E. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

F. "Channelized stream" means the definition set forth in Section 6111.01 (M) of the ORC.

G. "Commencement of construction" means the initial disturbance of soils associated with clearing, grubbing, grading, placement of fill, or excavating activities or other construction activities.

H. "Concentrated storm water runoff" means any storm water runoff which flows through a drainage pipe, ditch, diversion or other discrete conveyance channel.

I. "Director" means the director of the Ohio Environmental Protection Agency.

J. "Discharge" means the addition of any pollutant to the surface waters of the state from a point source.

K. "Disturbance" means any clearing, grading, excavating, filling, or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes the underlying soils.

L. "Drainage watershed" means for purposes of this permit the total contributing drainage area to a BMP, i.e., the "watershed" directed to the practice. This would also include any off-site drainage.

M. "Final stabilization" means that either:

1. All soil disturbing activities at the site are complete and a uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of at least 70 percent cover for the area has been established on all unpaved areas and areas not covered by permanent structures or equivalent stabilization measures (such as the use of mulches, rip-rap, gabions or geotextiles) have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion; or

2. For individual lots in residential construction by either:

   a. The homebuilder completing final stabilization as specified above or

   b. The homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for and benefits of, final stabilization. (Homeowners typically have an incentive to put in the landscaping functionally equivalent to final stabilization as quick as possible to keep mud out of their homes and off sidewalks and driveways.); or

3. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were previously used for agricultural activities, such as buffer strips immediately adjacent to surface waters of the state and which are not being returned to their pre-construction agricultural use, must meet the final stabilization criteria in (1) or (2) above.

N. "General contractor" – for the purposes of this permit, the primary individual or company solely accountable to perform a contract. The general contractor typically supervises activities, coordinates the use of subcontractors, and is authorized to direct workers at a site to carry out activities required by the permit.

O. "Individual lot NOI" means a Notice of Intent for an individual lot to be covered by this permit (see Part I of this permit).

P. "Larger common plan of development or sale"- means a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.

Q. "MS4" means municipal separate storm sewer system which means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that are:

1. Owned or operated by the federal government, state, municipality, township, county, district(s) or other public body (created by or pursuant to state or federal law) including special district under state law such as a sewer district, flood control district or drainage districts or similar entity or a designated and approved management agency under section 208 of the act that discharges into surface waters of the state; and
2. Designed or used for collecting or conveying solely storm water,
3. Which is not a combined sewer and
4. Which is not a part of a publicly owned treatment works.

R. "National Pollutant Discharge Elimination System (NPDES)" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and enforcing pretreatment requirements, under sections 307, 402, 318 and 405 of the CWA. The term includes an "approved program."

S. "Natural channel design" means an engineering technique that uses knowledge of the natural process of a stream to create a stable stream that will maintain its form and function over time.

T. "NOI" means notice of intent to be covered by this permit.

U. "NOT" means notice of termination.

V. "Operator" means any party associated with a construction project that meets either of the following two criteria:

1. The party has day-to-day operational control of all activities at a project which are necessary to ensure compliance with a SWP3 for the site and all permit conditions including the ability to authorize modifications to the SWP3, construction plans and site specification to ensure compliance with the General Permit, or

2. Property owner meets the definition of operator should the party which has day to day operational control require additional authorization from the owner for modifications to the SWP3, construction plans, and/or site specification to ensure compliance with the permit or refuses to accept all responsibilities as listed above (Part VII.V.1).

Subcontractors generally are not considered operators for the purposes of this permit. As set forth in Part I.F.1, there can be more than one operator at a site and under these circumstances, the operators shall be co-permittees.

W. "Ordinary high water mark" means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

X. "Owner or operator" means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.

Y. "Permanent stabilization" means the establishment of permanent vegetation, decorative landscape mulching, matting, sod, rip rap and landscaping techniques to provide permanent erosion control on areas where construction operations are complete or where no further disturbance is expected for at least one year.

Z. "Percent imperviousness" means the impervious area created divided by the total area of the project site.

AA. "Point source" means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or the floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

BB. "Qualified inspection personnel" means a person knowledgeable in the principles and practice of erosion and sediment controls, who possesses the skills to assess all conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.

CC. "Rainwater and Land Development" is a manual describing construction and post-construction best management practices and associated specifications. A copy of the manual may be obtained by contacting the Ohio Department of Natural Resources, Division of Soil & Water Conservation.

DD. "Riparian area" means the transition area between flowing water and terrestrial (land) ecosystems composed of trees, shrubs and surrounding vegetation which serve to stabilize erodible soil, improve both surface and ground water quality, increase stream shading and enhance wildlife habitat.

EE. "Runoff coefficient" means the fraction of total rainfall that will appear at the conveyance as runoff.

FF. "Sediment settling pond" means a sediment trap, sediment basin or permanent basin that has been temporarily modified for sediment control, as described in the latest edition of the Rainwater and Land Development manual.

GG. "State isolated wetland permit requirements" means the requirements set forth in Sections 6111.02 through 6111.029 of the ORC.

HH. "Storm water" means storm water runoff, snow melt and surface runoff and drainage.

II. "Steep slopes" means slopes that are 15 percent or greater in grade. Where a local government or industry technical manual has defined what is to be considered a "steep slope," this permit's definition automatically adopts that definition.

JJ. "Stream edge" means the ordinary high water mark.

KK. "Subcontractor" – for the purposes of this permit, an individual or company that takes a portion of a contract from the general contractor or from another subcontractor.

LL. "Surface waters of the state" or "water bodies" means all streams, lakes, reservoirs, ponds, marshes, wetlands or other waterways which are situated wholly or partially within the boundaries of the state, except those private waters which do not combine or effect a junction with natural surface or underground waters. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the ORC are not included.

MM. "SWP3" means storm water pollution prevention plan.

NN. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment

facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

OO. "Temporary stabilization" means the establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.

PP. "Water Quality Volume (WQ_v)" means the volume of storm water runoff which must be captured and treated prior to discharge from the developed site after construction is complete.

Appendix A
Big Darby Creek Watershed

CONTENTS OF THIS APPENDIX

A.1 Permit Area.

This appendix to Permit OHC00005 applies to the entire Big Darby Creek Watershed located within the State of Ohio. Please see Attachment A for permit area boundaries.

A.2 TMDL Conditions.

This general permit requires control measures/BMPs for construction sites that reflect recommendations set forth in the U.S. EPA approved Big Darby Creek TMDL.

A.3 Sediment Settling Ponds and Sampling

Sediment settling ponds additional conditions. The sediment settling pond shall be sized to provide a minimum sediment storage volume of 134 cubic yards of effective sediment storage per acre of drainage and maintain a target discharge performance standard of 45 mg/l Total Suspended Solids (TSS) up to a 0.75-inch rainfall event within a 24-hour period. Unless infeasible, sediment settling ponds must be dewatered at the pond surface using a skimmer or equivalent device. The depth of the sediment settling pond must be less than or equal to five feet. Sediment must be removed from the sediment settling pond when the design capacity has been reduced by 40 percent (This is typically reached when sediment occupies one-half of the basin depth).

Silt Fence and Diversions. For sites five or more acres in size, the use of sediment barriers as a primary sediment control is prohibited. Centralized sediment basins shall be used for sites 5 or more acres in size. Diversions shall direct all storm water runoff from the disturbed areas to the impoundment intended for sediment control. The sediment basins and associated diversions shall be implemented prior to the major earth disturbing activity.

The permittee shall sample in accordance with sampling procedures outlined in 40 CFR 136. Sampling shall occur as follows:

i. Occur at the outfall of each sediment settling pond associated with the site. Each associated outfall shall be identified by a three-digit number (001, 002, etc.);

ii. The applicable rainfall event for sampling to occur shall be a rainfall event of 0.25-inch to a 0.75-inch rainfall event to occur within a 24-hour period. Grab sampling shall be initiated at a site within 14 days, or the first applicable rainfall event thereafter, once upslope disturbance of each sampling location is initiated and shall continue on a quarterly basis. Quarterly periods shall be represented as January - March, April - June, July - September and October - December. Sampling results shall be retained on site and available for inspection.

If any sample is greater than the performance standard of 45 mg/l TSS, the permittee shall modify the SWP3 and install/implement new control practice(s) within 10 days to ensure the TSS performance standard is maintained. Within 3 days of improvement(s), or the first applicable rainfall event thereafter, the permittee shall resample to ensure SWP3 modifications maintain the TSS performance standard target.

For each sample taken, the permittee shall record the following information:

- the outfall and date of sampling;
- the person(s) who performed the sampling;
- the date the analyses were performed on those samples;
- the person(s) who performed the analyses;
- the analytical techniques or methods used; and
- the results of all analyses.

Both quarterly and sampling results following a discharge target exceedance shall be retained on site and available for inspection.

A.4 Riparian Setback Requirements.

The SWP3 shall clearly delineate the boundary of required stream setback distances. No construction activity shall occur, without appropriate mitigation, within the delineated setback boundary except activities associated with restoration or recovery of natural floodplain and channel form characteristics as described in Attachment B, storm water conveyances from permanent treatment practices and approvable utility crossings. Such conveyances must be designed to minimize the width of disturbance. If intrusion within the delineated setback boundary is necessary to accomplish the purposes of a project, then mitigation shall be required in accordance with Appendix A.5 of this permit. Streams requiring protection under this section are defined as perennial, intermittent or ephemeral streams with a defined bed, bank or channel. National Resources Conservation Service (NRCS) soil survey maps should be used as one reference and the presence of a stream requiring protection should also be confirmed in the field. Any required setback distances shall be clearly displayed in the field prior to any construction related activity.

Riparian setbacks distance shall be delineated based upon one of the following two methods:

i. The setback distance shall be sized as the greater of the following:

1. The regulatory 100-year floodplain based on FEMA mapping;

2. A minimum of 100 feet from the top of the streambank on each side; or

3. A distance calculated using the following equation:

$$W = 133DA^{0.43} \qquad \text{(Equation 1, Appendix A)}$$

where:
DA = drainage area (mi^2)
W = total width of riparian setback (ft)

W shall be centered over the meander pattern of the stream such that a line representing the setback width would evenly intersect equal elevation lines on either side of the stream.

If the DA remains relatively constant throughout the stretch of interest, then the DA of the downstream edge of the stretch should be used. Where there is a significant increase in the DA from the upstream edge to The downstream edge of the area of interest, the setback width shall increase accordingly.

ii. **Stream Restoration with 100 feet (each side) Riparian Setback**. Each stream segment within the proposed site boundaries can be assessed in accordance with Attachment B, Part 1. In the event the stream segment is classified as a "Previously Modified Low Gradient Headwater Stream", the permittee has the option to restore the stream segment in accordance with Attachment B and include a 100-foot water quality setback distance from the top of the streambank on each side. In the event the stream segment exceeds the minimum criteria in Attachment B to be classified as a "Previously Modified Low Gradient Headwater Stream," this Appendix A, Attachment B may be considered on a case-by-case basis.

No structural sediment controls (e.g., the installation of sediment barriers or a sediment settling pond) or structural post-construction controls shall be used in a surface water of the State or the delineated setback corridor.

Previously developed projects (as defined in Part III.G.2.e.) located within the delineated setback boundary are exempt from Riparian Setback Mitigation (A.5) provided the proposed project does not further intrude into the delineated setback boundary.

Linear transportation projects which are caused solely by correcting safety related issues, mandates of modern design requirements and/or resulting from other mitigation activities are exempt from Riparian Setback Mitigation (Appendix A, A.5) if less than one acre of total new right-of-way is associated with the project.

A.5 Riparian Setback Mitigation.

The mitigation required for intrusion into the riparian setback shall be determined by the horizontal distance the intrusion is from the stream. Up to three zones will be used in determining the required mitigation. Zone 1 extends from 0 to 25 feet from the stream edge. Zone 2 extends from 25 to 100 feet from the stream edge, and Zone 3 extends from 100 feet to the outer edge of the setback corridor. Intrusion into these zones will require the following mitigation within the same Watershed Assessment Unit (12-digit HUC scale):

i. Four times the total area disturbed in the stream and within Zone 1 of the site being developed shall be mitigated within Zone 1 of the mitigation location.

ii. Three times the area disturbed within Zone 2 of the site being developed shall be mitigated within Zones 1 and/or 2 of the mitigation location.

iii. Two times the area disturbed within Zone 3 of the site being developed shall be mitigated within any zone of the mitigation location.

In lieu of mitigation ratios found within in this section, linear transportation projects which result in total new right-of-way greater than one acre and less than two acres, which are caused solely by correcting safety related issues, mandates of modern design requirements and/or resulting from other mitigation activities, shall provide Riparian Setback Mitigation at a ratio of 1.5 to 1.

All mitigation shall, at a minimum, include conserved or restored setback zone and should be designed to maximize the ecological function of the mitigation. Including mitigation at the stream edge along with associated setback areas is one way to maximize ecological function. Mitigation shall be protected in perpetuity by binding conservation easements or environmental covenants which must be recorded within 6 months of receiving permit authorization. Granting of binding conservation easements or environmental covenants protected in perpetuity for land outside of disturbed area but within a required riparian setback counts towards required mitigation.

Mitigation may also be satisfied by approved pooled mitigation areas and in-lieu fee sponsored mitigation areas. Mitigation resulting from State or Federal environmental regulations may be adjusted in recognition of these requirements.

A.6 Groundwater Recharge Requirements.

The SWP3 shall ensure that the overall site post-development groundwater recharge equals or exceeds the pre-development groundwater recharge. The SWP3 shall describe the conservation development strategies, BMPs and other practices deemed necessary by the permittee to maintain or improve pre-development rates of groundwater recharge. Pre-development and post-development groundwater recharge shall be calculated using the following equation:

i. $Vre_x = A_x * Dre_x / 12$ (Equation 2, Appendix A)

where:
X = represents a land use and hydrologic soil group pair
Vre_x = volume of total annual recharge from land use-soil group X (in acre-ft)
Dre_x = depth of total annual recharge associated with land use-soil group X from Tables 1 or 2 (in inches)
A_x = area of land use-soil group X (in acres)

Table A-1 values should be used for land where the underlying geology indicates a potential for downward migration of groundwater. Table A-1 values represent the combined total groundwater recharge potential including groundwater contribution to stream baseflow and to the underlying bedrock aquifer. The potential for downward migration can be determined from a comparison of the potentiometric maps for the glacial and bedrock aquifers. Use Table A-2 when this potential is unlikely to exist. Detailed potentiometric maps for the Franklin county portion of the Darby watershed, and coarse potentiometric maps for the Darby watershed outside of Franklin County and hydrologic soil group data are available at: http://www.epa.state.oh.us/dsw/permits/GP_ConstructionSiteStormWater_Darby.aspx.

Table A-1 (Appendix A) Annual Average Expected Total Groundwater Recharge[3]

Land Use	Density (DU[1]/acre)	% Impervious	Recharge (inches) by Hydrologic Soil Group2			
			A	B	C	D
Woods / Forest	-	-	17.0	16.6	15.6	14.6
Brush	-	-	17.0	16.6	15.6	14.6
Meadow	-	-	17.0	16.5	15.4	14.4
Managed Wood	-	-	16.9	16.0	14.7	13.4
Pasture	-	-	16.5	15.9	14.4	13.0
Row Crop	-	-	15.8	14.2	11.9	8.1
Urban Grasses	-	-	15.7	15.7	14.2	12.7
Low Density Residential	0.5	12%	15.7	15.7	14.2	12.7
Low Density Residential	1	20%	14.8	14.8	13.7	12.2
Medium Density Residential	2	25%	11.5	11.5	11.5	11.5
Medium Density Residential	3	30%	11.2	11.2	11.2	11.2
Medium Density Residential	4	38%	9.6	9.6	9.6	9.6
High Density Residential	≥5	65%	7.3	7.3	7.3	7.3
Commercial & Road Right-of-Way[4]	-	90%	4.3	4.3	4.3	4.3

[1] DU = Dwelling Units
[2] Hydrologic soil group designations of A/D, B/D, and C/D should be considered as D soils for this application.
[3] These values apply when recharge of the aquifer is expected; recharge to the bedrock aquifer can be expected when the potentiometric head of the glacial aquifer is greater than the bedrock aquifer.
[4] The 4.3 infiltration value may only be used for an area as a whole (includes impervious and pervious areas) which includes a minimum of 10 percent pervious area. If all land uses (pervious and impervious) are tabulated separately, then impervious areas have 0 inches of recharge.

Table A-2 (Appendix A) Annual Average Expected Baseflow Recharge[3]

Land Use	Density (DU[1]/acre)	% Impervious	Recharge (inches) by Hydrologic Soil Group2			
			A	B	C	D
Woods / Forest	-	-	11.8	11.4	10.7	9.9
Brush	-	-	11.7	11.4	10.7	9..9
Meadow	-	-	11.8	11.3	10.6	9.8
Managed Wood	-	-	11.7	11.0	10.0	9.1
Pasture	-	-	11.3	11.0	9.9	8.9
Row Crop	-	-	11.1	10.1	9.0	6.2
Urban Grasses	-	-	11.2	11.2	10.3	9.3
Low Density Residential	0.5	12%	11.2	11.2	10.3	9.3
Low Density Residential	1	20%	9.5	9.5	9.0	8.6
Medium Density Residential	2	25%	7.8	7.8	7.8	7.8
Medium Density Residential	3	30%	7.6	7.6	7.6	7.6
Medium Density Residential	4	38%	6.5	6.5	6.5	6.5
High Density Residential	≥5	65%	5.0	5.0	5.0	5.0
Commercial & Road Right-of-Way[4]	-	90%	2.9	2.9	2.9	2.9

[1] DU = Dwelling Units
[2] Hydrologic soil group designations of A/D, B/D, and C/D should be considered as D soils for this application.
[3] These values apply when no recharge of the aquifer is expected.
[4] The 2.9 infiltration value may only be used for an area as a whole (includes impervious and pervious areas) which includes a minimum of 10 percent pervious area. If all land uses (pervious and impervious) are tabulated separately, then impervious areas have 0 inches of recharge.

Table A-3 (Appendix A) Land Use Definitions

Land Use	Definition
Woods / Forest	Areas dominated by trees. Woods are protected from grazing and litter and brush adequately cover the soil.
Brush	Brush, weeds, grass mixture where brush is the major element and more than 75% of the ground is covered.
Meadow	Continuous grass, protected from grazing, generally mowed for hay.
Managed Wood	Orchards, tree farms, and other areas planted or maintained for the production of fruits, nuts, berries, or ornamentals.
Pasture	Pasture, grassland, or range where at least 50% of the ground is covered and the area is not heavily grazed.
Row Crop	Areas used to produce crops, such as corn, soybeans, vegetables, tobacco, and cotton.
Urban Grasses	Vegetation (primarily grasses) planted in developed settings for recreation, erosion control, or aesthetic purposes. Examples include parks, lawns, golf courses, airport grasses, and industrial site grasses.
Residential	Areas with a mixture of constructed materials and vegetation; the average % imperviousness and number of dwelling units per acre to determine the appropriate density is specified.
Commercial	Includes infrastructure (e.g. roads, railroads, etc.) and all highly developed areas not classified as High Intensity Residential.

ii. The pre-development ground water recharge volume shall be calculated by determining the area of each land use-soil type pairing on the site of interest. The recharge associated with each such pairing multiplied by the area will give the pre-development volume of total groundwater

recharge. The same shall be done for the post-development land use-soil type pairings.

Any activity that is expected to produce storm water runoff with elevated concentrations of carcinogens, hydrocarbons, metals, or toxics is prohibited from infiltrating untreated storm water from the area affected by the activity. The groundwater recharge mitigation requirement for areas affected by such activities must be met by methods which do not present a risk of groundwater contamination. The following land uses and activities are typically deemed storm water hotspots:

Vehicle salvage yards and recycling facilities

- vehicle service and maintenance facilities (i.e. truck stops, gas stations)
- fleet storage areas (i.e. bus, truck)
- industrial sites subject to industrial storm water permitting requirements
- bulk terminals
- marinas
- facilities that generate or store hazardous materials
- other land uses and activities as designated by individual review

The following land uses and activities are not normally considered hotspots:

- residential streets and rural highways
- residential development
- institutional development
- commercial and office developments
- non-industrial rooftops
- pervious areas, except golf courses and nurseries

The applicant may use structural BMPs within drinking water source protection areas for community public water systems only to the extent that the structural BMP(s) does not cause contaminants in the recharge waters to impact the ground water quality at levels that would cause an exceedance of the drinking water Maximum Contaminant Levels (OAC Section 3745-81 and 3745-82). To obtain a map of drinking water source protection areas for community public water systems contact Ohio EPA's Division of Drinking and Ground Waters at (614) 644-2752.

Linear transportation projects which are caused solely by correcting safety related issues, mandates of modern design requirements and/or resulting from other mitigation activities are exempt from Groundwater Recharge Mitigation (Appendix B, A.7) if less than one acre of total new right-of-way is associated with the project.

Protection of open space (infiltration areas) shall be by binding conservation easements that identify a third-party management agency, such as a homeowners' association/condominium association, political jurisdiction or third-party land trust.

A.7 Groundwater Recharge Mitigation.

If the post-development recharge volume is less than the pre-development recharge volume, then mitigation will be required. Two options are available for most applications:

i. The preferred method is to convert additional land to land use with higher recharge potential. The difference in groundwater recharge between the existing and converted land use recharge is the amount which can be used as recharge credit. Off-site Groundwater Recharge Mitigation shall occur within the same Watershed Assessment Unit (12-digit HUC scale) as the permitted site and preferably up-gradient and within a 2-mile radius.

Mitigation shall be protected in perpetuity by binding conservation easements or environmental covenants which must be recorded within 6 months of receiving permit authorization. Granting of binding conservation easements or environmental covenants protected in perpetuity for land outside of the disturbed area, but within a required riparian setback counts towards required mitigation.

Mitigation may also be satisfied by approved pooled mitigation areas and in-lieu fee sponsored mitigation areas.

ii. On-site structural and non-structural practices may also be used to achieve groundwater mitigation requirements by retaining and infiltrating on-site a minimum volume of storm water runoff based on the area and hydrologic soil groups of disturbed soils. If these infiltrating practices are incorporated upstream of the water quality volume treatment practice, the volume of groundwater being infiltrated may be subtracted from the water quality volume for the purpose of meeting post-construction requirements. The on-site retention requirement is determined by the following formula:

$$V_{retention} = A_{HSG\text{-}A}*0.90 \text{ in} + A_{HSG\text{-}B}*0.75 \text{ in} + A_{HSG\text{-}C}*0.50 \text{ in} + A_{HSG\text{-}D}*0.25 \text{ in}$$

(Equation 3, Appendix A)

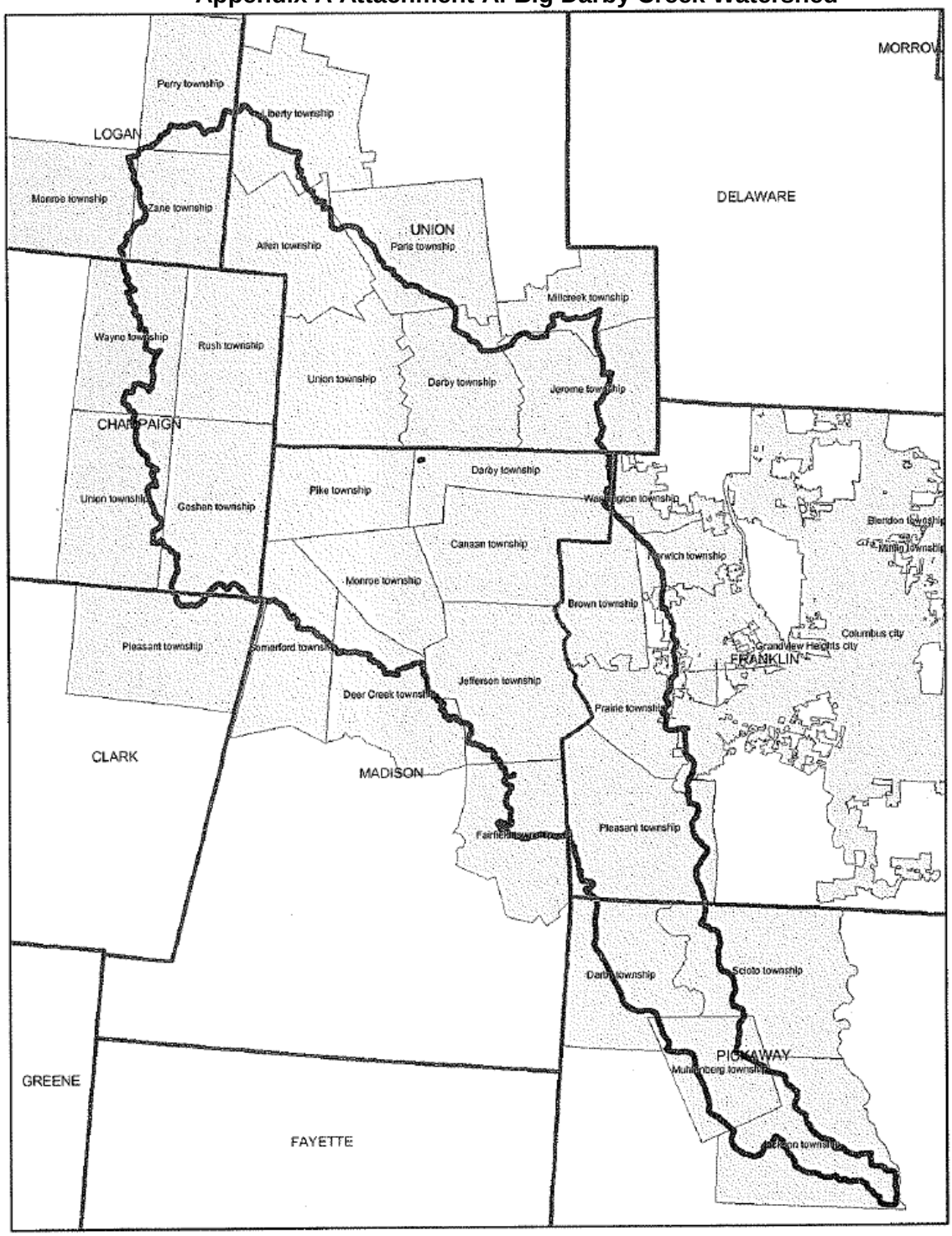
Where,
$V_{retention}$ = volume of runoff retained onsite using an approved infiltration practice
$A_{HSG\text{-}x}$ = area of each hydrologic soil group within the disturbed area

Table A-4: Hydrologic Soil Groups and On-site Retention Depth per Acre

Hydrologic Soil Group	HSG A	HSG B	HSG C	HSG D
Retention Depth (inches)	0.90	0.75	0.50	0.25

Retention volume ($V_{retention}$) provided by selected practices shall be determined using the runoff reduction method criteria as outlined in Part III.G.2.e, Ohio EPA's Runoff Reduction spreadsheet and supporting documentation in the Rainwater and Land Development manual. Hydrologic soil group (HSG) areas are to be determined by using the current version of SURRGO or Web Soil Survey soils information.

Appendix A Attachment A: Big Darby Creek Watershed



A more detailed map can be viewed at:
http://www.epa.state.oh.us/dsw/permits/GP_ConstructionSiteStormWater_Darby.aspx

Appendix A Attachment B

Part 1 Stream Assessment

This assessment will determine if a stream is considered a previously channelized, low-gradient headwater stream (a drainage ditch) which would be applicable for stream restoration in lieu of protecting a setback as per Appendix A. A.4.i and ii.

In the event the assessment of the stream, meets all the criteria listed below, restoration (provided 401/404 permits are authorized) as depicted in Part 2 of this attachment, may be a means of reducing the setback distance required by A.4.i. (Appendix A).

Previously Channelized Low-Gradient Headwater Streams (drainage ditches) shall for the purposes of this permit be defined as having all of the following characteristics:

- Less than 10 square miles of drainage area
- Low gradient and low stream power such that despite their straightened and entrenched condition incision (down-cutting) is not evident
- Entrenched, entrenchment ratio < 2.2
- Straight, sinuosity of the bankfull channel < 1.02

Part 2 Restoration

Restoration shall be accomplished by any natural channel design approach that will lead to a self-maintaining reach able to provide both local habitat and watershed services (e.g. self-purification and valley floodwater storage).

a. Construction of a floodplain, channel and habitat via natural channel design;
b. Floodplain excavation necessary to promote interaction between stream and floodplain;
c. Include a water quality setback of 100 feet from top of the streambank on each side.

The primary target regardless of design approach shall be the frequently flooded width, which shall be maximized, at 10 times the channel's self-forming width. Five times the self-forming channel width may still be acceptable particularly on portions of the site if greater widths are achieved elsewhere.

Appendix B
Olentangy River Watershed

CONTENTS OF THIS APPENDIX

B.1 Permit Area.

This appendix to Permit OHC00005 applies to specific portions of the Olentangy River Watershed located within the State of Ohio. The permit area includes the following 12-digit Hydrologic Unit Codes (HUC-12) within the Olentangy River Watershed:

12-Digit Hydrologic Unit Codes

12-Digit Hydrologic Unit Codes (HUC)	Narrative Description of Sub-Watershed
05060001 09 01	Shaw Creek
05060001 09 02	Headwaters Whetstone Creek
05060001 09 03	Claypool Run-Whetstone Creek
05060001 10 07	Delaware Run-Olentangy River
05060001 11 01	Deep Run-Olentangy River
05060001 11 02 (Only portion as depicted in Attachment A)	Rush Run-Olentangy River

Please see Attachment A (Appendix B) for permit area boundaries. An electronic version of Attachment A can be viewed at
http://epa.ohio.gov/dsw/permits/GP_ConstructionSiteStormWater_Olentangy.aspx

B.2 TMDL Conditions.

This general permit requires control measures/BMPs for construction sites that reflect recommendations set forth in the U.S. EPA approved Olentangy TMDL.

B.3 Riparian Setback Requirements.

The permittee shall comply with the riparian setback requirements of this permit or alternative riparian setback requirements established by a regulated MS4 and approved by Ohio EPA. The SWP3 shall clearly delineate the boundary of required stream setback distances. The stream setback shall consist of a streamside buffer and an outer buffer. No construction activity shall occur, without appropriate mitigation, within the streamside buffer except activities associated with storm water conveyances from permanent treatment practices, approvable utility crossings and restoration or recovery of floodplain and channel form characteristics as described in Attachment B. Storm water conveyances must be designed to minimize the width of disturbance.

Construction activities requiring mitigation for intrusions within the outer buffer for the Olentangy River mainstem and perennial streams are described in Appendix B.4.

If intrusion within the delineated setback boundary is necessary to accomplish the purposes of a project, then mitigation shall be required in accordance with Appendix B.3. of this permit. Streams requiring protection under this section have a defined bed and bank or channel and are defined as follows:

- The Olentangy River mainstem;
- Perennial streams have continuous flow on either the surface of the stream bed or under the surface of the stream bed;
- Intermittent streams flow for extended periods of time seasonally of a typical climate year; and
- Ephemeral streams are normally dry and only flow during and after precipitation runoff (episodic flow).

National Resources Conservation Service (NRCS) soil survey maps should be used as one reference and the presence of a stream requiring protection should also be confirmed in the field. Any required setback distances shall be clearly displayed in the field prior to any construction related activity.

Riparian setbacks shall be delineated based upon one of the following two methods:

i. The required setback distances shall vary with stream type as follows:

a. The setback distances associated with the mainstem of the Olentangy River shall consist of:

(1) A streamside buffer width of 100 feet as measured horizontally from the ordinary high water mark per side; and

(2) An outer buffer width sized to the regulatory 100-year floodplain based on FEMA mapping. No impervious surfaces shall be constructed without appropriate mitigation and moderate to substantial fill activities with no impervious surface may require appropriate mitigation pending an individual approval by Ohio EPA.

b. The setback distance associated with perennial streams, other than the Olentangy mainstem, shall consist of:

(1) A streamside buffer width of 80 feet per side measured horizontally from the ordinary high water mark; and

(2) An outer buffer width sized to the regulatory 100-year floodplain based on FEMA mapping. In the event the regulatory 100-year floodplain is not established, the outer buffer width shall be calculated using the following equation and measured horizontally from the ordinary high water mark. No impervious surfaces, structure, fill, or activity that would impair the floodplain or stream stabilizing ability of the outer buffer shall occur without appropriate mitigation:

$W = 143DA^{0.41}$ (Equation 1 Appendix B)

where:
DA = drainage area (mi^2)
W = total width of riparian setback (ft)

W shall be centered over the meander pattern of the stream such that a line representing the setback width would evenly intersect equal elevation lines on either side of the stream.

If the DA remains relatively constant throughout the stretch of interest, then the DA of the downstream edge of the stretch should be used. Where there is a significant increase in the DA from the upstream edge to the downstream edge of the area of interest, the setback width shall increase accordingly.

c. The setback distance associated with intermittent streams and ephemeral streams shall be a streamside buffer width of 30 feet per side measured horizontally from the centerline of the stream. No outer buffer is required for intermittent and ephemeral streams.

ii. Stream Restoration with 100 feet (each side) Riparian Setback. Each stream segment within the proposed site boundaries can be assessed in accordance with Attachment B. In the event the stream segment is classified as a "Previously Modified Low Gradient Headwater Stream", the permittee has the option to restore the stream segment in accordance with Attachment B and include a 100 feet water quality setback distance from the top of the streambank on each side. In the event the stream segment exceeds the minimum criteria in Attachment B to be classified as a "Previously Modified Low Gradient Headwater Stream", this may be considered on a case-by-case basis.

No structural sediment controls (e.g., the installation of sediment barriers or a sediment settling pond) or structural post-construction controls shall be used in a stream or the streamside buffer. Activities and controls that would not impair the floodplain or stream stabilizing ability of the outer buffer can be considered.

Redevelopment projects (i.e., developments on previously developed property) located within the delineated setback boundary is exempt from Riparian Setback Mitigation (B.3) provided the proposed project does not further intrude the delineated setback boundary.

B.4 Riparian Setback Mitigation.

The mitigation required for intrusion into the riparian setback of the **Olentangy River mainstem or perennial streams** shall be determined by the horizontal distance the intrusion is from the stream. Up to three zones will be used in determining the required mitigation. Zone 1 extends from 0 to 30 feet from the stream edge. Zone 2 extends

from 30 feet to the outer edge of the streamside buffer. Zone 3 extends from the outer edge of the streamside buffer to the outer edge of the outer buffer. Intrusion into these zones will require the following mitigation within the same Watershed Assessment Unit (12-digit HUC scale). Alternative mitigation, within the permit area, may be considered on a case-by-case basis:

1. Four (4) times the total area disturbed in the stream within Zone 1 of the site being developed shall be mitigated; or, two (2) times the total area disturbed in the stream within Zone 1 shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected by binding conservation easements or environmental covenants.

2. Three (3) times the area disturbed within Zone 2 of the site being developed shall be mitigated within Zones 1 and/or 2 of the mitigation location; or, one and one-half (1.5) times the total area disturbed within Zone 2 shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.

3. Two (2) times the area to be mitigated within Zone 3 of the site being developed shall be mitigated within any Zone of the mitigation location; or, one (1) times the total area to be mitigated within any zone shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.

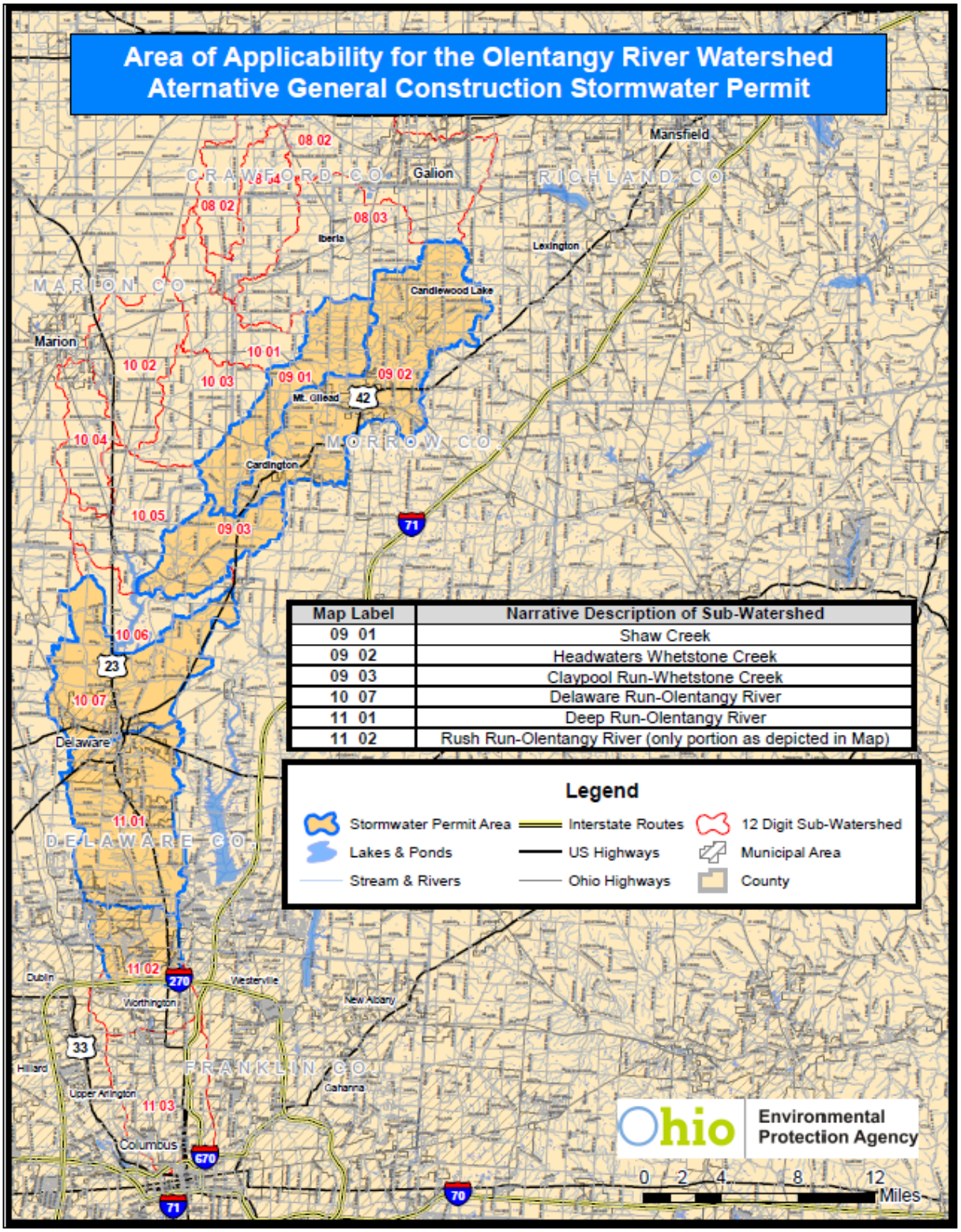
The mitigation required for intrusion into the riparian setback of an **intermittent stream** shall be four (4) times the total area disturbed within the riparian setback of the site being developed shall be mitigated; or two (2) times the total area disturbed within the riparian setback shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.

The mitigation required for intrusion into the streamside buffer of an **ephemeral stream** shall be two (2) times the total area disturbed within the riparian setback of the site being developed shall be mitigated; or one (1) times the total area disturbed within the riparian setback shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.

All mitigation shall, at a minimum, include conserved or restored setback zone, and should be designed to maximize the ecological function of the mitigation. Including mitigation at the stream edge along with associated setback areas is one way to maximize ecological function. Mitigation shall be protected in perpetuity by binding conservation easements or environmental covenants which must be recorded within 6 months of permit authorization. Granting of binding conservation easements or environmental covenants protected for land outside of disturbed area, but within a required riparian setback counts towards required mitigation.

Mitigation may also be satisfied by approved pooled mitigation areas and in-lieu fee sponsored mitigation areas. Mitigation resulting from State or Federal environmental regulations may be adjusted in recognition of these requirements.

Appendix B Attachment A Applicable Portions of the Olentangy Watershed



A more detailed map can be viewed at:
http://epa.ohio.gov/dsw/permits/GP_ConstructionSiteStormWater_Olentangy.aspx

Appendix B Attachment B

Part 1 Stream Assessment

This assessment will determine if a stream is considered a previously channelized, low-gradient headwater stream (a drainage ditch) which would be applicable for stream restoration in lieu of protecting an outer 'no build' setback as per Appendix B B.2i. and ii.

In the event the assessment of the stream meets all the criteria listed below, restoration as depicted in Part 2 of this attachment or natural channel design could be performed, provided 401/404 permits are authorized, and may be a means of reducing the setback distance required by B.2.i. (Appendix B).

Previously Modified, Low-Gradient Headwater Streams shall, for the purposes of this permit, be defined as having all of the following characteristics:

- Less than 10 square miles of drainage area;
- Low gradient and low stream power such that incision (down-cutting) is not evident;
- Entrenched such that the ratio of the frequently flooded width to the bankfull width is less than 2.2; and
- Straight with little or no sinuosity present such that the ratio of the bankfull channel length to the straight-line distance between two points is less than 1.02.

Part 2 Restoration

Restoration shall be accomplished by any natural channel design approach that will lead to a self-maintaining reach able to provide both local habitat and watershed services (e.g. self-purification and valley floodwater storage).

a. Construction of a floodplain, channel and habitat via natural channel design;
b. Floodplain excavation necessary to promote interaction between stream and floodplain;
c. Include a water quality setback of 100 feet from top of the streambank on each side.

The primary target shall be a frequently flooded width of 10 times the channel's self-forming width. Five times the self-forming channel width may be acceptable if sufficient elements of natural channel design are included in the restoration project.

Appendix C Rainfall Intensity for Calculation of Water Quality Flow (WQF)

DURATION t_c (minutes)	WATER QUALITY INTENSITY [i_{wq}] (inches/hour)	DURATION t_c (minutes)	WATER QUALITY INTENSITY [i_{wq}] (inches/hour)
5	2.37	33	0.95
6	2.26	34	0.93
7	2.15	35	0.92
8	2.04	36	0.90
9	1.94	37	0.88
10	1.85	38	0.86
11	1.76	39	0.85
12	1.68	40	0.83
13	1.62	41	0.82
14	1.56	42	0.80
15	1.51	43	0.78
16	1.46	44	0.77
17	1.41	45	0.76
18	1.37	46	0.75
19	1.33	47	0.74
20	1.29	48	0.73
21	1.26	49	0.72
22	1.22	50	0.71
23	1.19	51	0.69
24	1.16	52	0.68
25	1.13	53	0.67
26	1.10	54	0.66
27	1.07	55	0.66
28	1.05	56	0.65
29	1.03	57	0.64
30	1.01	58	0.64
31	0.99	59	0.63
32	0.97	60	0.62

Note: For t_c < 5 minutes, use i = 2.37 in/hr; for t_c > 60 minutes, use i = 0.62 in/hr. For all other t_c, use the appropriate value from this table.

APPENDIX C

CONSTRUCTION PERMIT NOTICE OF INTENT
(TO BE PROVIDED AT A LATER DATE)

APPENDIX D

CONTRACTOR REVIEW CERTIFICATION

CONTRACTOR REVIEW CERTIFICATION
Construction Storm Water Pollution Prevention Plan
Former Satralloy Site – Stage 2 Interim Action – Demolition

Contractor/Operator: _____

As a contractor (or subcontractor), you are required to comply with the Storm Water Pollution Prevention Plan (SWP3) for any work that you perform on-Site. Any person or group who violates any condition of the SWP3 may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWP3. A copy of the SWP3 is available for your review at the office trailer.

Each contractor (including subcontractors) engaged in activities at the construction Site that could impact storm water must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWP3 for the above designated project and agree to follow the BMPs and practices described in the SWP3.

This certification is hereby signed in reference to the above-named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

_____

_____

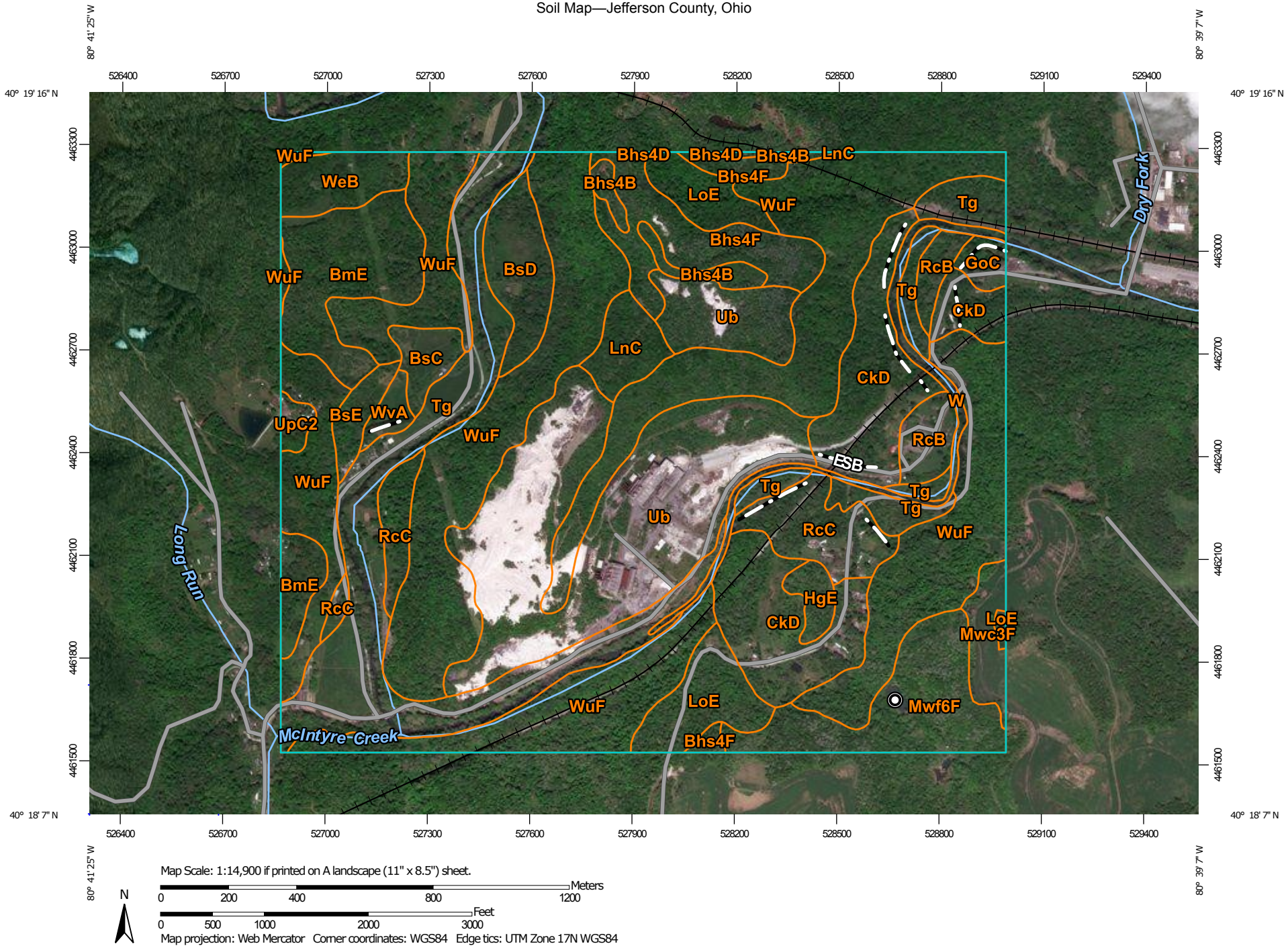
Signature: _____

Title: _____

Date: _____

APPENDIX E

USDA SOIL MAP



Map Scale: 1:14,900 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 200 400 800 1200

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Ohio
Survey Area Data: Version 17, Sep 17, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 23, 2014—Mar 7, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Bhs4B	Bethesda channery silt loam, 0 to 8 percent slopes, unreclaimed	8.1	0.9%
Bhs4D	Bethesda channery silt loam, 8 to 25 percent slopes, unreclaimed	0.8	0.1%
Bhs4F	Bethesda channery silt loam, 25 to 70 percent slopes, unreclaimed	34.0	3.7%
BmE	Berks-Guernsey complex, 25 to 40 percent slopes	44.4	4.8%
BsC	Brookside silty clay loam, 8 to 15 percent slopes	8.0	0.9%
BsD	Brookside silty clay loam, 15 to 25 percent slopes	19.1	2.1%
BsE	Brookside silty clay loam, 25 to 40 percent slopes	6.8	0.7%
CkD	Clarksburg silt loam, 15 to 25 percent slopes	76.7	8.3%
GoC	Gilpin-Coshocton silt loams, 8 to 15 percent slopes	4.6	0.5%
HgE	Hazleton-Westmoreland complex, 25 to 40 percent slopes	5.5	0.6%
LnC	Lowell silt loam, 8 to 15 percent slopes	11.5	1.2%
LoE	Lowell silty clay loam, 25 to 40 percent slopes	30.6	3.3%
Mwc3F	Morristown silty clay loam, 25 to 70 percent slopes, reclaimed	10.1	1.1%
Mwf6F	Morristown channery silty clay loam, 25 to 70 percent slopes, unreclaimed	37.9	4.1%
RcB	Richland silt loam, 1 to 7 percent slopes	14.2	1.5%
RcC	Richland silt loam, 7 to 15 percent slopes	30.1	3.3%
Tg	Tioga silt loam, occasionally flooded	112.2	12.1%
Ub	Udorthents, loamy	138.2	14.9%
UpC2	Upshur silty clay loam, 8 to 15 percent slopes, eroded	3.2	0.3%
W	Water	11.5	1.2%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
WeB	Wellston silt loam, 1 to 7 percent slopes	14.0	1.5%
WuF	Westmoreland-Lowell complex, 40 to 70 percent slopes	299.3	32.4%
WvA	Wheeling silt loam, 0 to 3 percent slopes	4.3	0.5%
Totals for Area of Interest		**925.1**	**100.0%**

APPENDIX F

DISTURBED AREAS MONITORING LOG

DISTURBED AREAS MONITORING LOG

Construction Storm Water Pollution Prevention Plan

Former Satralloy Site - Stage 2 Interim Action - Demolition

Log #	Disturbed Area Name	Start Date	Start Date plus 7 Days	BMPs Required (Yes or No)	Start Date plus 30 Days	Stabilization Date	Sample Required (Yes or No)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							

APPENDIX G

STORM WATER SAMPLING LOG

DISTURBED AREA STORM WATER SAMPLING LOG
Construction Storm Water Pollution Prevention Plan
Former Satralloy Site – Stage 2 Interim Action – Demolition

Instructions:

Disturbed Area samples for each Active Disturbed Area and upstream and downstream samples must be collected monthly (every 30 days) until a Disturbed Area is stabilized. Table 3 and Drawings IAS-420 and IAS-430 identify the sample location(s) for each Disturbed Area.

During each sampling event, complete one form for each Disturbed Area and one form for the upstream sample and one for the downstream sample collected. Print as many copies of this form as needed.

Log the sampling event onto the Construction SWP3 Activities Log.

Sample Location _____

Sampler's Name _____

Date of storm event: _____

Duration of storm event (in hours): _____

Duration between storm events: _____
(time in days between the storm event when sampling is being conducted and the last storm event that produced rainfall great than 0.1 inches of rain)

Approximate amount of precipitation since the last inspection (in inches): _____

Approximate amount of precipitation within the last 24 hours (in inches):

_____

Identify the type of sample:
Sample ID: _____
Upstream Sample: _____
Downstream Sample: _____

Visual Inspection Information:

Storm water sample will be visually examined for the presence of suspended sediment, turbidity, discoloration and an oily sheen. Describe the following for each sample:

Suspended sediment _____

Turbidity _____

Discoloration_____

Oily sheen present (yes or no) _____

APPENDIX H

CONSTRUCTION SWP3 INSPECTION CHECKLIST

Construction SWP3 - BMP Inspection Checklist
Former Satralloy Site - Stage 2 Interim Action - Demolition

Inspection Date: _____ **Inspector Name:** _____ **Signature:** _____

Weather Conditions Prior to Inspection: _____

(1) BMP or Drainage Feature ID	(2) BMP or Drainage Feature Description	(3) Date BMP/Drainage Feature Installed	(4) Date BMP/Drainage Feature Removed	(5) Good Working Condition and effective? (Yes/No/NA)	(6) Description of BMP/Drainage Feature Deficiency (Add additional pages for descriptions as necessary and enter information on the Inspection Activities Log.)

Instructions: This form will be used in conjunction with the Inspection Activity Log. Log all inspections on the Inspection Activity Log. If a BMP deficiency is identified, describe the deficiency on this inspection log (front or back) or on additional paper.

Site inspections must be conducted 1) at least once per calendar week during demolition activities and 2) within 24 hours of any of any storm event greater than ½ inch of rain in a 24-hour period.

Definitions:

Unverified catch basins / manholes are based on historical drawings and are shown for reference only. Contractor is not required to inspect or confirm location. If Contractor identifies or discovers a previously unverified catch basin or manhole, the Contractor shall bring the information to the attention of the Construction Manager for further action.

Catch basins / manholes that have been verified previously but are no longer visible (CB-43, CB-28, CB-29, CB-30) – Contractor is not required to inspect or verify locations of catch basins or manholes that have been verified previously but are no longer visible. If Contractor identifies or discovers a previously verified catch basin or manhole, the Contractor shall bring this information to the attention of the Construction Manager for further action.

Contractor Support and Operations Area					
CB-17	Catch basin located northeast of the pumphouse.	Existing			
SF-54	Silt fence at CB-17.	Existing			
CB-18	Catch basin located across road to north of NMB.	Existing			
SF-55	Silt fence at CB-18.	Existing			
CB-21/CB-41	Catch basin located west of pump house. CB to be covered with a steel plate during demolition.	Existing			
CP-4	Culvert Pipe at entry of Primary Vehicle Access.	Existing			
GC-1	Gravel cover in Primary Vehicle Access area.	Existing			
GC-2	Gravel cover around trailers.	Existing			
GC-4	Gravel cover in area of decon pad.	Existing			
GC-5	Gravel cover in area of tire pile and wood chip pile.	Existing			
GC-6	Gravel cover in parking area.	Existing			
Gate 3 Road Area					
SF-1	Reinforced silt fence located along south side of filled portion of Wetland D (filled as part of Stage 1 IA activities).	Existing			
SF-70	Silt fence straw bale barrier to be installed along south side of Wetland D.				
HW-8	Head wall on south side of Gate 3 Road.	Existing			
CB-59	New catch basin installed as part of Stage 1 IA in front of HW-8.	Existing			
SF-50	Silt fence straw bale barrier located at the toe of Wetland D, upgradient of CB-59.	Existing			

Construction SWP3 - BMP Inspection Checklist
Former Satralloy Site - Stage 2 Interim Action - Demolition

(1) BMP or Drainage Feature ID	(2) BMP or Drainage Feature Description	(3) Date BMP/Drainage Feature Installed	(4) Date BMP/Drainage Feature Removed	(5) Good Working Condition and effective? (Yes/No/NA)	(6) Description of BMP/Drainage Feature Deficiency (Add additional pages for descriptions as necessary and enter information on the Inspection Activities Log.)
CB-7	Catch basin on north side of Gate 3 Road.	Existing			
ST-49	Sand tubes located upgradient of CB-7.	Existing			
DD-2	Drainage ditch located along County Road 74 between Gate 3 Road and the Primary Access Road.	Existing			
CB-23	Manhole located southwest of the admin building. Orange safety fence to be installed around CB during Stage 2 IA as a visual warning to protect feature and to prevent entry of material.	Existing			
Non-Hazardous Waste Placement Area					
DB-4	Diversion berm to be installed along the north side of the Non-Hazardous Waste Placement Area *(Note: Required before placement of non-hazardous waste)*				
South Mill Building (SMB) Area					
CB-58	New catch basin installed as part of Stage 1 IA, at toe of RR-5.	Existing			
RR-5	Riprap located on hill north of SMB, upgradient of CB-58.	Existing			
CB-48	Catch basin in concrete pad in front of south bins. Sediment to be removed and CB to be covered with a steel plate during demolition.	Existing			
ST-11	Sand tubes to be installed upgradient of CB-48 following demolition.				
CB-24	Catch basin was disconnected from line that was abandoned during the Stage 1 IA, and was connected into new drainage line located just north of abandoned line. Orange safety fence to be installed around CB during Stage 2 IA as a visual warning to protect feature and to prevent entry of material.	Existing			
RR-8	New riprap installed upgradient of CB-24 during Stage 1 IA.	Existing			
CB-25	Catch basin in concrete pad in front of south bins. CB to be covered with a steel plate during demolition.	Existing			
ST-12	Sand tubes to be installed upgradient of CB-25 following demolition.				
CB-26	Catch basin in concrete pad in front of south bins. CB to be covered with a steel plate during demolition.	Existing			
ST-13	Sand tubes to be installed upgradient of CB-26 following demolition.				
CB-27	Catch basin located south of SMB, near the east end of DB-3. Ponded area next to CB to be filled with clean general fill during Stage 2 IA.	Existing			
ST-10	Sand tubes to be installed around CB-27.				
CB-44	Culvert entrance located north of Baghouse #3 at SMB. Culvert entrance to be covered with a steel plate during demolition.	Existing			
CB-52	Catch basin located in line from CB-27 to HW-8, southeast of the SMB.	Existing			
SF-60	Silt fence to be installed entirely around CB-52.				

Construction SWP3 - BMP Inspection Checklist
Former Satralloy Site - Stage 2 Interim Action - Demolition

(1) BMP or Drainage Feature ID	(2) BMP or Drainage Feature Description	(3) Date BMP/Drainage Feature Installed	(4) Date BMP/Drainage Feature Removed	(5) Good Working Condition and effective? (Yes/No/NA)	(6) Description of BMP/Drainage Feature Deficiency (Add additional pages for descriptions as necessary and enter information on the Inspection Activities Log.)
MH-3	Raised manhole located south of the pumphouse and north of CB-24. Orange safety fence to be installed around MH during Stage 2 IA as a visual warning to protect feature.	Existing			
CP-1	Culvert pipe between south off gas piping and south bins. Orange safety fence to be installed around MH during Stage 2 IA as a visual warning to protect feature.	Existing			
CP-2	Culvert pipe located on south side of SMB. Maintain existing orange safety fence.	Existing			
DB-3	Diversion berm located along the southwest corner of the SMB.	Existing			
DD-6	Diversion ditch south of SMB.	Existing			
DD-7	Diversion ditch along west side of SMB.	Existing			
HW-10	Head wall entrance to culvert that runs beneath County Road 74.	Existing			
Borrow Area 1G Area					
HW-50	Head wall located southeast of transmission tower #3, south of Borrow Area 1G.	Existing			
SF-61	Silt fence straw bale barrier to be installed upgradient of HW-50.				
CB-55	New catch basin installed as part of Stage 1 IA Wetland E infill. Orange safety fence to be installed around CB during Stage 2 IA as a visual warning to protect feature and to prevent entry of material.	Existing			
CB-56	New catch basin installed as part of Stage 1 IA Wetland E infill. Orange safety fence to be installed around CB during Stage 2 IA as a visual warning to protect feature and to prevent entry of material.	Existing			
CB-57	New catch basin installed as part of Stage 1 IA Wetland E infill. Orange safety fence to be installed around CB during Stage 2 IA as a visual warning to protect feature and to prevent entry of material.	Existing			
SF-44	Silt fence to be installed at toe of Borrow Area 1G.				
North Mill Building (NMB) Area					
CB-19	Catch basin along east side of NMB. CB to be covered with a steel plate during demolition.	Existing			
SF-56	Silt fence at CB-19.	Existing			
CB-28	Catch basin in concrete pad in front of north bins. CB to be covered with a steel plate during demolition.	Existing			
ST-15	Sand tubes to be installed upgradient of CB-28 following demolition.				
CB-29	Catch basin in concrete pad in front of north bins. CB to be covered with a steel plate during demolition.	Existing			
ST-16	Sand tubes to be installed upgradient of CB-29 following demolition.				
CB-30	Catch basin south end of off-gas piping by north bins. Orange safety fence to be installed around CB during Stage 2 IA as a visual warning to protect feature and to prevent entry of material.	Existing			

Construction SWP3 - BMP Inspection Checklist
Former Satralloy Site - Stage 2 Interim Action - Demolition

(1) BMP or Drainage Feature ID	(2) BMP or Drainage Feature Description	(3) Date BMP/Drainage Feature Installed	(4) Date BMP/Drainage Feature Removed	(5) Good Working Condition and effective? (Yes/No/NA)	(6) Description of BMP/Drainage Feature Deficiency (Add additional pages for descriptions as necessary and enter information on the Inspection Activities Log.)
CB-54	New catch basin installed as part of Stage 1 IA Wetland E infill. Orange safety fence to be installed around CB during Stage 2 IA as a visual warning to protect feature and to prevent entry of material.	Existing			
DD-9	Drainage ditch (lip in concrete pad) in front of north bins.	Existing			
CP-5	Culvert pipe at southwest corner of NMB, south of north silos. Orange safety fence to be installed around CP during Stage 2 IA as a visual warning to protect feature.	Existing			
ST-14	Sand tubes to be installed upstream of CP-5 entrance following demolition.				
Borrow Areas 2G, A and B Area					
MH-5	Manhole located northeast of NMB. Orange safety fence to be installed around MH during Stage 2 IA as a visual warning to protect feature.	Unverified			
RR-7	Riprap placed on slope to north of NMB.	Existing			
CP-3	Culvert pipe located north of NMB at end of DD-4. Sediment to be removed.	Existing			
SF-62	Silt fence straw bale barrier to be installed upstream of CP-3 entrance.				
CB-31	Catch basin located between the south end of the slurry pipeline and the rail offload ramp, replaced during Stage 1 IA.	Existing			
SF-31	Silt fence / straw bale barrier at CB-31.	Existing			
DD-4	Diversion Ditch at toe of Borrow Area 2G.	Existing			
SF-64	Silt fence to be installed at toe of Borrow Area 2G.				
SF-65	Silt fence to be installed at toe of Borrow Areas A and B, if used.				
General Plant Area (GPA)					
DB-7	Diversion berm along the north side of Gate 1 Road.	Existing			
Swale #2	Swale located east of the NMB.	Existing			
SF-63	Silt fence / straw bale barrier to be installed in Swale #2, upstream of RR-2.				
RR-2	Riprap at end of Swale #2.	Existing			
DD-3	Ditch along road, north of Primary Access Road.	Existing			
DD-5	Drainage ditch between the NMB and County Road 74.	Existing			
DD-5A	Drainage ditch between the NMB and County Road 74.	Existing			
GC-3	Gravel (or slag) cover between NMB and County Road 74.	Existing			

Construction SWP3 - BMP Inspection Checklist
Former Satralloy Site - Stage 2 Interim Action - Demolition

(1) BMP or Drainage Feature ID	(2) BMP or Drainage Feature Description	(3) Date BMP/Drainage Feature Installed	(4) Date BMP/Drainage Feature Removed	(5) Good Working Condition and effective? (Yes/No/NA)	(6) Description of BMP/Drainage Feature Deficiency (Add additional pages for descriptions as necessary and enter information on the Inspection Activities Log.)
HW-5	Head wall entrance to culvert that runs beneath County Road 74.	Existing			
SF-47	Reinforced silt fence straw bale barrier at HW-5.	Existing			
CB-6	Catch basin that discharges to culvert that runs beneath County Road 74.	Existing			
SF-48	Silt fence straw bale barrier at CB-6.	Existing			
Railspur and Northern Area					
Swale #3	Swale on the north side of rail spur.	Existing			
Swale #1A	New inlet channel to proposed settling pond.				
Swale #1B	Remaining portion of original Swale #1 from rail spur to HW-5.	Existing			
Swale #4	New outlet channel from proposed settling pond.				
RR-1	Riprap at beginning of Swale #1 on south side of rail spur.	Existing			
RR-4	Riprap on north side of rail spur.	Existing			
DB-1	Diversion berm in slag along west side of County Road 74.	Existing			
Upper Plateau Access Road Upgrades					
SF-66	Silt fence to be installed above wetland along Mine Area Access Road.				
SF-67	Silt fence to be installed above wetland along Mine Perimeter Road.				
SF-68	Silt fence to be installed above wetland along Mine Perimeter Road.				
SF-69	Silt fence to be installed above wetland along Mine Perimeter Road.				
Site Roads					
1	Gate 1 Road	Existing			
2	Primary Access Road	Existing			
3	Gate 3 Road	Existing			
4	Center Access Road	Existing			
5	Cooling Tower Road	Existing			
6	Main Plant Road	Existing			
7	North Access Road	Existing			
8	NMB Lower Baghouse Road	Existing			
9	NMB Ore Access Road	Existing			

Construction SWP3 - BMP Inspection Checklist
Former Satralloy Site - Stage 2 Interim Action - Demolition

(1) BMP or Drainage Feature ID	(2) BMP or Drainage Feature Description	(3) Date BMP/Drainage Feature Installed	(4) Date BMP/Drainage Feature Removed	(5) Good Working Condition and effective? (Yes/No/NA)	(6) Description of BMP/Drainage Feature Deficiency (Add additional pages for descriptions as necessary and enter information on the Inspection Activities Log.)
10	North Rail Spur Road	Existing			
11	Plant Road	Existing			
12	SMB Ore Access Road	Existing			
13	SMB Lower Access Road	Existing			
14	Plateau Road	Existing			
15	Mine Area Access Road	Existing			
16	Mine Perimeter Road	Existing			
17	North Slurry Pit Road	Existing			
18	South Slurry Pit Road	Existing			
19	Slurry Pipeline Road	Existing			
20	Northwest Ridge Road	Existing			

Key:

CB = Catch Basin
CP = Culvert Pipe
DB = Diversion Berm
DD = Diversion Ditch
GC = Gravel Cover
MH = Manhole
RR = Riprap
SF =Silt Fence
ST = Sand Tube

Other Observations:

APPENDIX I

SWP3 ACTIVITIES LOG

SWP3 ACTIVITIES LOG
Construction Storm Water Pollution Prevention Plan
Former Satralloy Site – Stage 2 Interim Action – Demolition

The SWP3 Activities Log is to be used as a record of the implementation of SWP3 requirements. The types of activities to log on this form include, but are not limited to:

• Control measures and BMP inspections	• Construction storm water visual assessments.
• Control measure and BMP maintenance activities.	• Addition of new Disturbed Areas.
• Modifications to control measures or implementation of additional control measures.	• Final stabilization activities

Activity Date	Inspector/ Sampler Name(s)	Description of Activity	Description of Control Measure Deficiency and Corrective Action Needed (including planned date/responsible person)	Date Action Taken / Responsible person

APPENDIX J

SWP3 AMENDMENT LOG

SWP3 AMENDMENT LOG
Construction Storm Water Pollution Prevention Plan
Former Satralloy Site – Stage 2 Interim Action – Demolition

Amendment No.	Description of the Amendment	Date of Amendment	Amendment Prepared by (Name(s) and Title(s)

APPENDIX K

DELEGATION OF AUTHORITY

DELEGATION OF AUTHORITY
Construction Storm Water Pollution Prevention Plan
Former Satralloy Site – Stage 2 Interim Action – Demolition

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the _____ construction Site. The designee is authorized to sign any reports, storm water pollution prevention plans and all other documents required by the permit.

_____ (name of person or position)
_____ (company)
_____ (address)
_____ (city, state, zip)
_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in _____ (Reference State Permit), and that the designee above meets the definition of a "duly authorized representative" as set forth in _____ (Reference State Permit).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in general accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____

Company: _____

Title: _____

Signature: _____

Date: _____

APPENDIX L

SWP3 TRAINING LOG

SWP3 TRAINING LOG
Construction Storm Water Pollution Prevention Plan
Former Satralloy Site – Stage 2 Interim Action – Demolition

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

Storm Water Training Topic: *(check as appropriate)*

- ❑ **Erosion Control BMPs**
- ❑ **Emergency Procedures**
- ❑ **Sediment Control BMPs**
- ❑ **Good Housekeeping BMPs**
- ❑ **Non-Storm Water BMPs**

Specific Training Objective:_____

_____

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
12		
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